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Rogue River National Forest

Stories on the Land:

An Environmental History of the Applegate and Upper Illinois Valleys

George McKinley
Doug Frank

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An Environmental History of the Applegate and Upper Illinois Valleys

Report prepared for the Bureau of Land Management
Medford District, Medford, Oregon

September 1995

George McKinley and Doug Frank

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PREFACE AND SUMMARY

This project was undertaken under a contract with the Bureau of Land Management. Its purpose is to trace the changes in the landscape of two southern Oregon watersheds, the Applegate and the Illinois, and to delineate the processes which contributed to these changes, beginning with the historic era.

We have tried to fulfill this purpose by weaving together a story about human presence on the landscape of our study area. It is a story about human understandings of the land, human purposes for the land, human activity on the land. Out of those understandings, purposes and activities have arisen concrete effects on the land. As much as we have been able, we have woven all this into a single story, avoiding backtracking and repetition wherever possible.

At times, our story has required us to rise above the study area and take perspective from places farther afield: the Pacific Northwest, the American West, Washington, D.C. The study area has not existed in a geographical or historical vacuum. An increasingly integrated national system has pressed the study area into service, bringing distant forces to bear upon the lives of "locals" in the Applegate and Illinois Valleys, shaping those lives and the land by its own irresistible imperatives. We have tried to remember that wider context in order to add interpretive depth to the stories we tell at the local level.

Our story's center of gravity seems to fall somewhat earlier than a sheer calculus of the years might predict. By the time we have completed the first of our four chapters, we have still only seen the first six years of Euro-American settlement in southern Oregon. But it is in those six years, primarily, that the clash of cultures, and thus of management regimes, is most dramatic and concentrated. Those six years, in some respects, saw greater humanly-caused disturbance to the landscape than had previous millennia. In the changes wrought by those six years, and in the visions we construct of the land "before and after," are rooted today's hottest management debates and ideological battles. Yet, it is precisely those early years of Euro-American incursion on the landscape that are most shrouded in mystery, susceptible to romanticism, fragmentary in their supply of data. We hope our story might contribute to schooling the kind of imagination it will take to wend our way constructively, perhaps even peacefully, through the ideological minefields that lie athwart today's social and forest management landscapes.

Historians, and increasingly scientists, are no longer operating under the illusion that we can know and tell what actually is or was. History and science are human constructions. Authors are present in their text, whether they admit it or not. We will try to honor that truth by speaking as humans, not as disembodied authorities, and by sharing with the reader the frustrations of the topic and the puzzles that we encounter as we try to tell a story that makes sense. At the same time, we understand that the reader may be engaged in a different conversation than we think we are engaged in, and thus will read here a different story than we believe we are telling. Whatever that conversation may be, we hope we can contribute to making it a lively one.

As we traversed across a wide spectrum of sources, and strove to tell a tale faithful to these, as well as our own opinions and intuitions, our story separated itself out into five sections. In the first of these, the Introduction, we provide a general lay-of-the-land. Discussions of geography and climate history, geology and plant communities, the arrival of humans into the region and the role of fire across the landscape -- these help set the stage for a transition into the historic era.

Before we enter the historic era, we travel across the landscape with a female grizzly bear, once a common participant in regional life. We follow the grizzly in pursuit of spring vegetation. Our goal is to evoke a *feel* for the land prior to the arrival of Euro-Americans, an arrival the grizzly was able to weather for only a few decades.

In Chapter One, we cover those first early years of massive regional transformation. Peter Skene Ogden and his company of Hudson Bay trappers wandered through the region in 1827, the first Euro-Americans to do so. The last of the area natives were removed to a coastal reservation in 1856. In the course of years between these events, the physical landscape of the region was altered by the removal of beaver, the influx of settlement, and hunt for gold, and the area was well into the first of the boom-bust cycles which have largely occupied it and defined it until the present day.

The first of these cycles was dependent upon gold. Gold brought thousands to the area in the single year between New Year's Day 1852 and New Year's Day 1853. This onslaught is more impressive as it is noted that only 27 or 28 Euro-Americans lived in the Rogue River basin on the earlier holiday. The first years of the gold rush saw miners scour virtually the entire area of the watersheds of the study area in pursuit of the precious metal. With the removal of the natives, settlement and agriculture soon expanded. One of our earliest glimpses of the land comes from Donation Land Claim surveys, filed in this era.

That this report goes on to track the next of the boom-bust cycles in its telling of history, and not the lives and fates of those vanquished to the coast, marks it as a product of the inheritors of the victorious legacy.

In Chapter Two, the "usual happenings" of expanding settlement and a growing, agriculturally-based economy are related. In this chapter we tell a tale of the years between 1857 and 1900, of clearing the land and connecting to the outside world. The railroad arrives to much fanfare, bringing expanded opportunity -- though the valleys of our study area go from the center to the periphery of regional focus, as the new depots of Grants Pass and Medford step to the fore. Mining continues, but it reluctantly takes a back-seat to agriculture, and becomes less the practice of rugged individuals than the management of land, crews, and the new hydraulic technology by those with sufficient capital.

We glimpse the land at the end of this era, considering briefly the impacts of hydraulic mining and the disappearance of marshy areas in riparian zones. We also consult Government Land Office survey notes from these years to read the state of the forest along the Applegate/Illinois divide.

Chapter Three, covering the years between 1900 and 1945, finds an entrenched agricultural community within the bounds of the study area. Grazing -- by cattle, sheep, and goats -- was at the heart of this community. This often put community members at odds with new arrivals on the scene at this time, federal land managers.

These managers of the newly established and expanding federal reserves were confronted with a two-fold difficulty in their earliest years. On one hand, they were "managing" the grazing activities of a population which considered federal browse as good as their (cow's) own, and on the other, they were fighting the "annual ravages of fire" -- which at the time was considered by the agencies to be complicit in depleting the timber base -- amongst a local population which considered burning to be standard practice for a variety of reasons, including hunting and range improvement. By the end of the era regulation, community persuasion, and demographics converged to rein in grazing. Similar convergence saw fire suppression emerge as a standard and supported practice -- ironically, just in time for a latter generation of managers to question the practice. The impact of grazing emerges as a major legacy of this era.

Chapter Four traces the decline of the family farm/ranch, and the arrival of the timber harvest at the economic -- and environmental -- core of the study area. Within the study area, timber harvest has been a post-WW II phenomenon, its impact most visible during the years of heavy clearcutting, the 1960's and 1980's. We interview several key agency players from these years to learn about the processes and impacts of logging across the landscape. Aerial photos prove a useful tool in marking change. The fragmentation of the inherited forest mosaic emerges as a major legacy of this era, as does the increasing visibility of the effects of some 80 years of amazingly successful fire suppression.

Several generations and varieties of "back-to-the-landers" converged on the area during this time. The current round, retirees and urbanites, may well find themselves and their "transfer incomes" -- incomes from holdings, or sources not requiring current work -- as the center of the next "boom."

This cursory glimpse of our story gives an idea of the breadth and complexity of issues we confronted in our effort to tell an environmental history of the Applegate and Illinois Valleys. If, reader, you conclude that we have only scratched the surface of our topic, only told one of many possible stories, you have come to the same conclusion as we.

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INTRODUCTION

ENTERING THE HISTORIC ERA

Our story is a narrative of the interrelationships of natural processes and human purpose on the landscape of the Applegate and Illinois Valleys during the "historic" era. If we, the authors, were not ourselves "historical" beings, related by the chance of birth to the Euro-Americans who entered these valleys in the second quarter of the nineteenth century, we would doubtless tell a different story. And the difference would tell from the very start. In identifying the landscape on which our narrative is launched, we might choose to speak of famous ancestors who accomplished great deeds on this spot. Or we might draw on the moral universe represented in the land, and speak of "coarse-textured rocks lie above in a compact cluster" which we remember because there a man was killed with a rock for transgressing the rule prohibiting incest.[1] This would not make for the kind of study appreciated by the modern mind. But it would be more interesting than the conventional way of introducing a landscape by drawing lines and calculating numbers. To which we now turn.

Boundaries of the Study Area

The Applegate and Illinois Valleys are major tributaries of the Rogue River. That river rises in the western slopes of the Cascade Mountains in southwest Oregon and runs resolutely to the sea. The study area could be roughly framed in a rectangle measuring about 40 miles north-to-south and 50 miles west-to-east. Within the contours of the study area's watersheds lie about 720,000 acres.

To the south, the study area is bound by the crest of the Siskiyou Mountains. The Siskiyou Mountains lie at the heart of the Klamath Geological Province and provide the study area both geographic definition, and floral and faunal diversity. The wandering southern boundary of the study area traces an east-west line which transects the Oregon-California border and stretches from Youngs Peak (6,304 feet) on the west to Siskiyou Peak (7,147 feet) on the east.

To the east, the study area is bounded by a ridge separating the Applegate River and the Bear Creek drainages. From Siskiyou Peak near Mt. Ashland, the line descends northwest over Wagner Butte (7,140 feet) to Timber Mountain (4,425 feet). The northern boundary traces a lower elevation, west-northwesterly ridge dividing the Applegate and Rogue River drainages. It reaches a low point at the mouth of the Applegate River (about 875 feet).

To the west, the boundary follows a north-south line from Onion Mountain to the confluence of the Illinois River and Deer Creek below Eight Dollar Mountain (4,001 feet). From here, the line follows the Illinois drainage upstream past Indian Hill (2,007 feet) to Youngs Peak (6,304 feet), the south-west corner of the study area and starting point for the above geographic survey.

The study area is bisected by a line that traces the divide between the Applegate and Illinois watersheds. This line runs north from Sucker Creek Gap on the Siskiyou Crest, over Craggy Mountain (6,331 feet), Grayback Peak (7,055 feet), Holcomb Peak (5,288 feet), and Roundtop Mountain (4,762 feet), before turning west and over Mooney Mountain (2,580 feet) to Serpentine Point (4,282 feet).

---

[1]Keith H. Basso explores an alternative land identification system, more conducive to narrative styles, in *Western Apache Language and Culture: Essays in Linguistic Anthropology*, "Stalking with Stories: Names, Places, and Moral Narratives Among the Western Apache," (Tuscon: U. of Arizona Press, 1990), pp. 99-137.

The study area could be roughly framed in a rectangle measuring 40 miles north-to-south and 50 miles west-to-east. Within the contours lie some 720,000 acres.
ASHLAND
TALENT
PHOENIX
MEDFORD
CENTRAL POINT
EAGLE POINT
JACKSONVILLE
GRANTS PASS
ROGUE RIVER
APPLEGATE LAKE
JACKSON CO
SISKIYOU CO
JOSEPHINE CO
DEL NORTE CO
T 48 N
R 12 W
R 4 E
Mt Diablo Base and Meridian
Humboldt Base and Meridian

The Watersheds in the Study

The study area comprises eight sub-basins.[2] These include the Lower Applegate, Williams Creek, Middle Applegate, Little Applegate, and Upper Applegate sub-basins of the Applegate River watershed, and the Deer Creek, Sucker Creek, and Upper Illinois sub-basins of the Illinois River watershed. Many of the significant tributaries within these sub-basins will figure in the narrative to follow. These include:

Lower Applegate: Slate Creek, Cheney Creek, Murphy Creek, Baum Slough;

Williams Creek: East Fork Williams Creek, West Fork Williams Creek, Powell Creek;

Middle Applegate: Ferris Gulch, Thompson Creek, Star Gulch, Palmer Creek, Beaver Creek, Spencer Gulch, Forest Creek, Humbug Creek;

Little Applegate: Yale Creek, Glade Creek, McDonald Creek, Sterling Creek;

Upper Applegate: Carberry Creek, Brush Creek, O'Brien Creek, Sturgis Creek, Middle Fork Applegate, Butte Fork Applegate, Elliott Creek, Joe Creek, Dutch Creek, Silver Fork;

Deer Creek: Draper Creek, Crooks Creek, Thompson Creek, McMullin Creek;

Sucker Creek: Grayback Creek, Cave Creek, Bolan Creek;

Upper Illinois: Althouse Creek, Democrat Gulch, Elder Creek, Dunn Creek, East Fork Illinois River, and Sailor Gulch.

[2] Map by Larry Zowada, Bureau of Land Management, Medford District.

AN ENVIRONMENTAL HISTORY OF THE APPLEGATE

AND ILLINOIS VALLEYS : WATERSHED SUB-BASINS

- Lower Applegate 90,581 acres
- Middle Applegate 83,620 acres
- Little Applegate 72,259 acres
- Upper Applegate 194,459 acres
- Williams Creek 51,925 acres
- Deer Creek 72,570 acres
- Sucker Creek 62,100 acres
- Upper Illinois 87,257 acres

The Natural History of the Siskiyou Mountains

The Applegate and Illinois Valleys sit amidst some of the "oldest and most complex geologic assemblages" in North America.[3] We can begin our story of their origin some 200 million years ago, when the continental land mass of which they now form a part was then submerged beneath the Pacific Ocean. This mass had previously separated from the African continent and shifted west across the ocean floor. The accumulated debris at the forefront of this westward migration, transformed by heat, pressure, and time, eventually produced the Klamath Geologic Province of today.

With the ocean to the west, "[t]he Klamath Geological Province roughly forms a square between Coos Bay and Crater Lake to the north and Eureka and Redding to the south. The inland border of the Klamath Province abuts the Cascades Province at Redding, Medford, and Tiller."[4] In the upper, south-central portion of this region sit the Applegate and Illinois River watersheds.

By about 2 million years ago, the basic topography of the region was similar to that of today. The rock underlying that topography—a mixture of ocean floor and continental shelf, marine sediment and volcanic flow—is primarily metamorphosed sediments and volcanics, with intrusions of acidic granitics and ultrabasic peridotite. These have co-mingled to produce the "jigsaw pattern" of parent rock found across the Klamath Province today. What this implies for the environmental history of the region, is that "each parent rock produced a variety of soils, a variety of habitats and consequently a variety of plant communities."[5] Upon this diverse foundation of rock and soil, born of time and movement, we can note another major factor contributing to regional complexity: a changing climate.

Regional climate some 2 million years ago, unlike topography, was far from familiar. During this winding down phase of the Pleistocene Epoch, which extended to about 12,000 years ago, the region experienced regular intervals of glaciation at higher elevation, and significantly cooler temperatures at lower elevation.[6] The climate did not assume familiar form until very recently. Indeed, it is only with the onset of the warmer interval of the Holocene Epoch, at about 10,000 years ago, that we see "the arrival of environmental processes which have continued up to the present day, such as soil formation, plant succession, lake ontogeny and faunal migration."[7]

The Holocene in southwest Oregon can be divided into three general phases—early, middle and late.[8] The early Holocene, as noted above, arrived at the conclusion of the Pleistocene Epoch, the end of which was punctuated by a three hundred year drought. The arrival of the Holocene brought to the area a climate—though warmer than the Pleistocene "Ice Age"—significantly cooler and moister than at present. Contemporary conifer species were present, and during this time they expanded their range upslope from riparian bottoms.

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[3]Applegate River Watershed Council, *Applegate Watershed Assessment*, November 1994, p.1.

[4]Thomas Atzet and Robert Martin, "Natural Disturbance Regimes in the Klamath Province," *Proceedings of the Symposium on Biodiversity of Northwestern California*, October 28-31, 1991, p. 40.

[5]Thomas Atzet and David Wheeler, "Historical and Ecological Perspectives on Fire Activity in the Klamath Geological Province of the Rogue River and Siskiyou National Forests," (Portland, OR: United States Department of Agriculture, Forest Service, Pacific Northwest Region) July 1982, p.3.

[6]Jeff LaLande, "Rogue River Time Line: A Chronology of the Rogue River National Forest and the Surrounding Area," Rogue River National Forest, January 1982, p.4.

[7]Neil Roberts, *The Holocene: An Environmental History* , (Oxford: Basil Blackwell, 1989), p.62.

[8]Jeff LaLande, *An Environmental History of the Little Applegate River Watershed*, Rogue River National Forest, 1995, pp. 6-10. Information on the Holocene Epoch is indebted to this work.

The mid-Holocene, beginning c. 7,500 years ago, brought a period of hot and dry weather. This long period of drought, however, was punctuated by short periods of marked variation. It was during this time that the oak savannah/woodland communities probably spread across the area, taking residence in areas they dominate still. According to some archeological and paleobotanical evidence, the mid-Holocene is also noteworthy as an era of expanding faunal capacity, including that of humans.

The late Holocene, stretching from approximately 4,500 years ago to the present, brought a return of cooler and moister weather to the region. So cool and moist, in fact, that the globally felt "Little Ice Age" of approximately 1350-1850 stands representative of the era, and emerges as a key event in regional climate history. Enjoying this recent cool, wet spell, conifers expanded into current areas of habitation. The Little Ice Age drew to a close with a marked drought in the mid-19th century.

It is with this transitional period of drought, that Euro-Americans enter the landscape on which our narrative unfolds. LaLande has attempted to trace the outlines of the climate history of the past 200 to 300 years by consulting nineteenth century meteorological data and by studying tree-ring growth rates. These suggest that

> the 'present,' like the past, has probably been marked by 'cycles within cycles' of relative drought and relative high moisture that have lasted varying periods; the range of 'normal' weather for the area has apparently included decades-long hot, dry spells and substantial periods of temperate-to-cool weather.[9]

The warmer and drier years of the post-Little Ice Age era construct our memories of regional climate. Thus, the drought years of the latter 1980s remain central to the current collective consciousness regarding regional weather patterns. The previous fifty years of above average precipitation, however, stand a distant memory to most current inhabitants of the region. If we consult averages since European settlement, we see a surprising consistency in the patterns of fluctuation dating back to 1854. The following graph shows vividly the fluctuations of "normal" noted by LaLande.[10]

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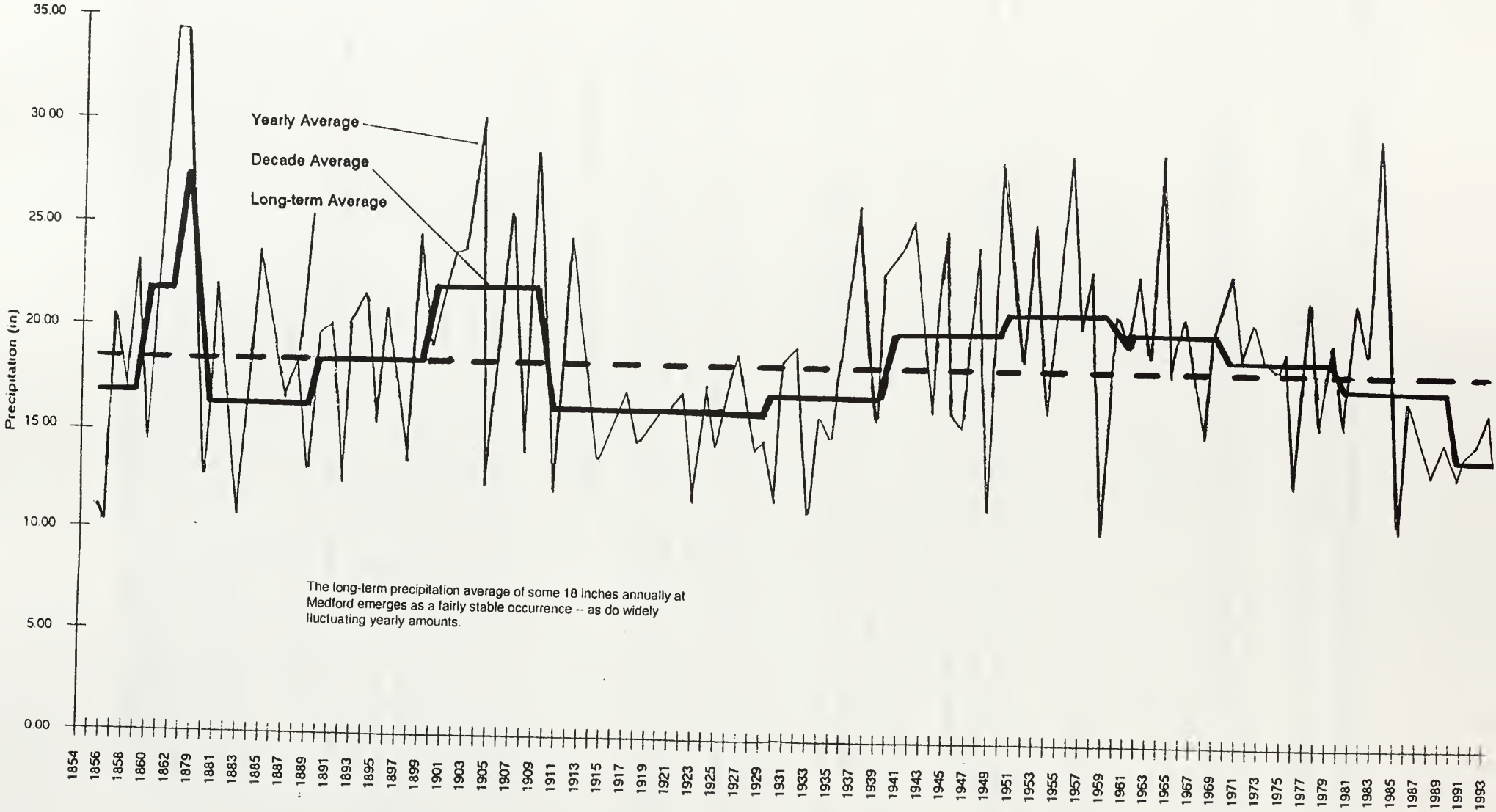
[9]Ibid., p. 10.

[10]Adapted from the "Little Applegate River Watershed Analysis," Rogue River National Forest and Medford District, Bureau of Land Management, p. 5.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30.00
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Precipitation (in)
Yearly Average
Decade Average
Long-term Average
The long-term precipitation average of some 18 inches annually at Medford emerges as a fairly stable occurrence -- as do widely fluctuating yearly amounts.
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1993

The long-term precipitation average of some 18 inches annually at Medford emerges as a fairly stable occurrence. However, just beyond this chart, just removed from the horizon of Euro-American experience, lies a weather pattern of significant difference. It is this different weather that lingers fresh in the collective "memory" of the floral communities in the region. In this memory, fluctuation is a given. Contemporary research is beginning to recognize this feature of climate history. "In terms of both climate and vegetation, no millennium has been exactly like any other during the last 20,000 years." This suggests that contemporary plant communities are but "loose associations adjusting their ranges to environmental changes on various time scales."[11]

With this in mind, a big picture sketch suggests that forests are not really ancient abodes of timeless stability but are instead mobile participants in shifting community. Responding to heat and moisture in various ways, these communities of changing composition move across the landscape, upslope and down, north and south, as the weather patterns of the appropriate millennium suggest. If predictions of global warming are correct, Pacific Northwest forests could be on the verge of new movement. Some forest communities will emerge more or less successful in the transition. Within the Applegate and Illinois Valleys, change could favor those communities which have evidenced the greatest success in transition periods of the past, like Douglas-fir and ponderosa pine.[12] Although such speculation runs ahead of our story, it emphasizes the need to remember scale in discussions surrounding change.

Plant Communities of the Siskiyou Mountains

In order to read change across the landscape, it is helpful to understand the current composition of resident floral communities. The Siskiyou Mountains[13] region possesses a broad-based spectrum of plant species of diverse origin. As far back as sixty million years ago, climatic change encouraged the spread of northern species into this area. Ancestors of today's mountain hemlock, noble fir, subalpine fir, silver fir and Alaska cedar date their arrival from this era. The tendency for the above species to exist in the study area only at higher elevation, and in cooler zones, reflects their origin.

As this northern influx was modified by regional distinctives, particularly by moist coastal weather patterns, today's most common species evolved. These include true firs, Port Orford cedar, western redcedar, coast redwoods and Douglas-fir. Hardwood species emerging from this process include dogwood, maple and alder. The Douglas-fir has proven most adept at finding a home in the region. "Its present range is far greater than any of the other species mentioned."[14]

Over time this northern influx waned due to a drying climate, and a southern surge brought ancestors of other species now common. These include xeric (dry environment) genera such as pine, oak and madrone. Further evolution of southern ancestors occurred as recently as the mid-Holocene dry era, and produced manzanita, ceanothus and other chaparral species common to hot, dry, shallow soil locations were introduced.

We still see these northern and southern descendants jostling across the study area, searching for microclimatic sites tied to climates of origin. In general,

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[11]Cathy Whitlock, "Vegetational and Climatic History in the Pacific Northwest during the Last 20,000 Years: Implications for Understanding Present-day Biodiversity," *The Northwest Environmental Journal*, 8 (1992), p.22.

[12]Whitlock, p.22.

[13] In this report, a reference to a restricted geographic region running roughly parallel to the California-Oregon border, and existing as a portion of the broader "Klamath Geologic Province."

[14]T. Atzet and L. McCrimmon, *Preliminary Plant Associations of the Southern Oregon Cascade Mountain Province*, Siskiyou National Forest, 1990, p. 14.

the species of northern descent tend to operate most efficiently in the colder environments of the upper elevations. . . . Species of southern descent tend to compete well in hot, dry environments on shallow slopes and recently disturbed sites.[15]

Vegetation Zones

Ecologists have established "zones" in recognition of the fact that floral communities tend to flourish in specialized habitats. In their classic study, Natural Vegetation of Oregon and Washington, Franklin and Dyrness suggest the presence of five vegetation zones in southwestern Oregon. These include an Interior Valley Zone, a Mixed-Evergreen Zone, a Mixed-Conifer Zone, a White-Fir Zone and a Shasta Red Fir Zone.

The Interior Valley Zone represents lower elevation, valley-bottom, dry forest communities dominated by deciduous oak. The zone includes grassland, savannah, and wooded areas. Ponderosa pine is common, dominating the landscape along with oak.

The Mixed-Evergreen and Mixed-Conifer Zones encompass a catch-all categorization aimed at encompassing those areas between the lower, drier oak zone and the higher elevation White and Shasta Red Fir zones. Within the study area, these zones are dominated by Douglas-fir and, in the Illinois Valley, tanoak. The presence of ponderosa pine, white oak, and black oak point to the transitional nature of these broad zones. White fir can also be present. The Mixed-Evergreen Zone tends to be more common in the western Siskiyou (Illinois Valley and western Applegate watershed), while the Mixed-Conifer is more common in the eastern Siskiyou (eastern Applegate watershed). In general, this recognizes the tendency of broadleafs to more comfortable further west in the region.

The White-Fir and Shasta Red Fir Zones are higher elevation, cooler areas dominated by those species.

The zones suggested by Franklin and Dyrness tend toward generalization, with consequent lack of site and species specificity. Gene Hickman has expanded upon this general "zonal" approach to provide a more detailed vegetation map of the Applegate watershed. Hickman has mapped seven major vegetation zones across the Applegate. Four are warmer, low elevation zones; the remaining three grade to cooler, higher elevations.

The ***Dry Oak-Conifer Zone*** is the driest and lowest of these seven zones. Average precipitation ranges from 27 to 40 inches; elevation runs from 900 to 4,200 feet. This is the most common zone, covering "over half the watershed including the main interior valleys." This zone includes diverse communities "ranging from open grassland to oak savannah and forest."[16] The savannah is dominated by white oak, often with ponderosa pine. Woodlands add Douglas-fir, madrone, canyon live-oak and black oak to the landscape. Floodplains also occur, dominated by cottonwood, ash, maple and willow. Brush fields include wedgeleaf ceanothus, whiteleaf manzanita and poison oak.

The ***Interior Tanoak Zone*** occupies a warm climate zone of greater precipitation than the Dry Oak-Conifer Zone. Precipitation is 40 to 70 inches annually; elevations range from 1,200 to 4,000 feet. Tanoak is dominant here. It is common in tree form on north aspects and in shrub form on south aspects. Douglas-fir also dominates the overstory. Madrone is common southern aspects. Sugar pine, ponderosa pine, incense cedar, black oak, canyon live oak and golden chinquapin are also present. Oceanspray is present in brushy areas, as are whiteleaf manzanita and poison oak.

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[15]Ibid., p. 15.

[16]Gene Hickman, "Natural Vegetation of the Applegate Watershed," Natural Resources Conservation Service, 1995, p. 2.

Tanoak is rare in the Applegate region, its presence confined to western fringes bordering the Illinois Valley, where Tanoak is much more common.

Ranging from 1,500 to 4,000 feet in elevation, the ***Moist Mixed Conifer Zone*** is situated on primarily north-aspect, moist, mountain slopes. Precipitation ranges from 35 to 50 inches per year. This zone is significant as a transition between the lower elevation, dry zones and moist, higher elevation zones. "Mixed conifer forests dominate the zone."[17] Douglas-fir and white fir dominate the north aspects, often in the company of incense cedar, sugar pine and Jeffrey pine. Ponderosa pine replaces white fir as a dominant on south aspects. Black oak and madrone are common throughout the zone, while golden chinquapin and dogwood favor north aspects. Bigleaf maple, white alder and Pacific yew inhabit drainages. Shrubs are widespread, particularly oceanspray, snowberry, deerbrush, bearbrush and hazel.

Although Hickman identifies a ***Douglas-fir/Chinquapin Zone***, he describes it as minor within the watershed. "The Moist Mixed Conifer Zone description can be used for general information since the zones are similar.[18]

The ***Cool Mixed Conifer Zone*** occupies a narrow elevation band between 4,000 and 5,000 feet. "It represents upper slopes, ridgetops and islands around mountain peaks."[19] Average precipitation ranges from 40 to 60 inches. This zone presents clear climatological variation from the lower elevation zones, with considerable precipitation as snow, a much shorter growing season, and cooler year-round temperatures. North aspect overstory dominates are white fir and Douglas-fir. Douglas-fir, once again, is more prevalent on southern slopes. Incense cedar, ponderosa pine, and sugar pine are common, though not dominant, throughout. Lower elevation, southern slopes can display madrone and black oak. However, madrone becomes conspicuous in its absence from both brushfields and forest on north slopes or higher elevations, a clear sign of cooler climate. This cooler climate also adds redstem ceanothus, greenleaf manzanita and Saddler oak to the understory. Oceanspray and Cascade Oregongrape are ubiquitous. "A rich assortment of understory forbs indicate high moisture availability and/or cooler temperatures."[20]

The ***White Fir Zone*** lies at high elevation (5,000 to 5,600 feet) and favors north slopes. It receives over 50 inches of precipitation annually, much of it in snow. The growing season here is considerably shorter than in the lower elevation zones. White fir dominates north slopes, sometimes in pure stands, and shares south slopes with Douglas-fir. Shasta red fir and incense cedar are also present. Shrub cover is lower, evidenced by cold-tolerant snowbrush, greenleaf manzanita and Saddler oak.

The ***Shasta Fir Zone*** lies above 5,000 feet, and climbs the highest ridges. It lies in the coldest climate areas and receives most of its 50 plus inches of precipitation in the form of snow. Shasta red fir dominates north-aspect slopes, sometimes along with white fir. On south aspects, white fir can dominate alone. Understories and ground cover are sparse.

At highest elevations, the Shasta Fir Zone grades into the ***Mountain Hemlock Zone***. This is not considered a major zone of the study area, but it does point to the presence of mountain hemlock communities at scattered, highest elevation locations.

Hickman's work cited here addresses the Applegate portion of our study area. To date, Hickman has yet to publish comparable information on the Illinois Valley, though this work is forthcoming.[21] We can anticipate finding similar zones are spread across the Illinois Valley portion of the area as well. For instance, a Dry Oak-Conifer Zone spreading along riparian floors and up

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[17] Ibid., p. 3.

[18] Ibid., p. 3.

[19] Ibid., p. 3.

[20] Ibid., p. 4.

[21] Fall, 1995. Gene Hickman, personal communication.

lower elevation hills, and a higher portion of Interior Tanoak than found in the Applegate watershed. Along the Applegate/Illinois divide, the zones of the Applegate drainage will likely be mirrored in the Illinois drainage. At higher elevations along this divide and the Siskiyou crest, cooler zones—the Cool Mixed Conifer, White Fir, and Shasta Fir Zones—will likely dominate. These general assumptions are not meant to detract from Hickman's forthcoming work, which promises new layers of site-specificity in mapping and further progress in the development of "zones."

The Illinois Valley portion of the study area also contains a greater concentration of serpentine soils than does the Applegate. Serpentine areas are unique in that "soils are invariably unproductive, having very shallow and stony profiles."[22] They are also rich in minerals such as chromium, magnesium, and nickel. Though perhaps "unproductive," serpentine sites are also rich in endemic and generally less common plant species.

Though most of these areas lie north and west of our area of focus, serpentine-based soil communities are present. On xeric serpentine sites, like those in the vicinity of Eight Dollar Mountain, Jeffrey pine can stand alone as the dominant and sole tree species. On sites with more moisture, north aspect and/or less concentrated serpentine soils, Douglas-fir often shares dominance. Canyon live oak and manzanita are common in this understory. This shared dominance is perhaps more indicative of the smaller serpentine outcrops most common across the main portion of the study area. Beargrass, "considered the most useful single indicator of small serpentine outcrops," is common in these areas as well.[23] In moist areas, the Cobra plant (*Darlingtonia californica*) is common.

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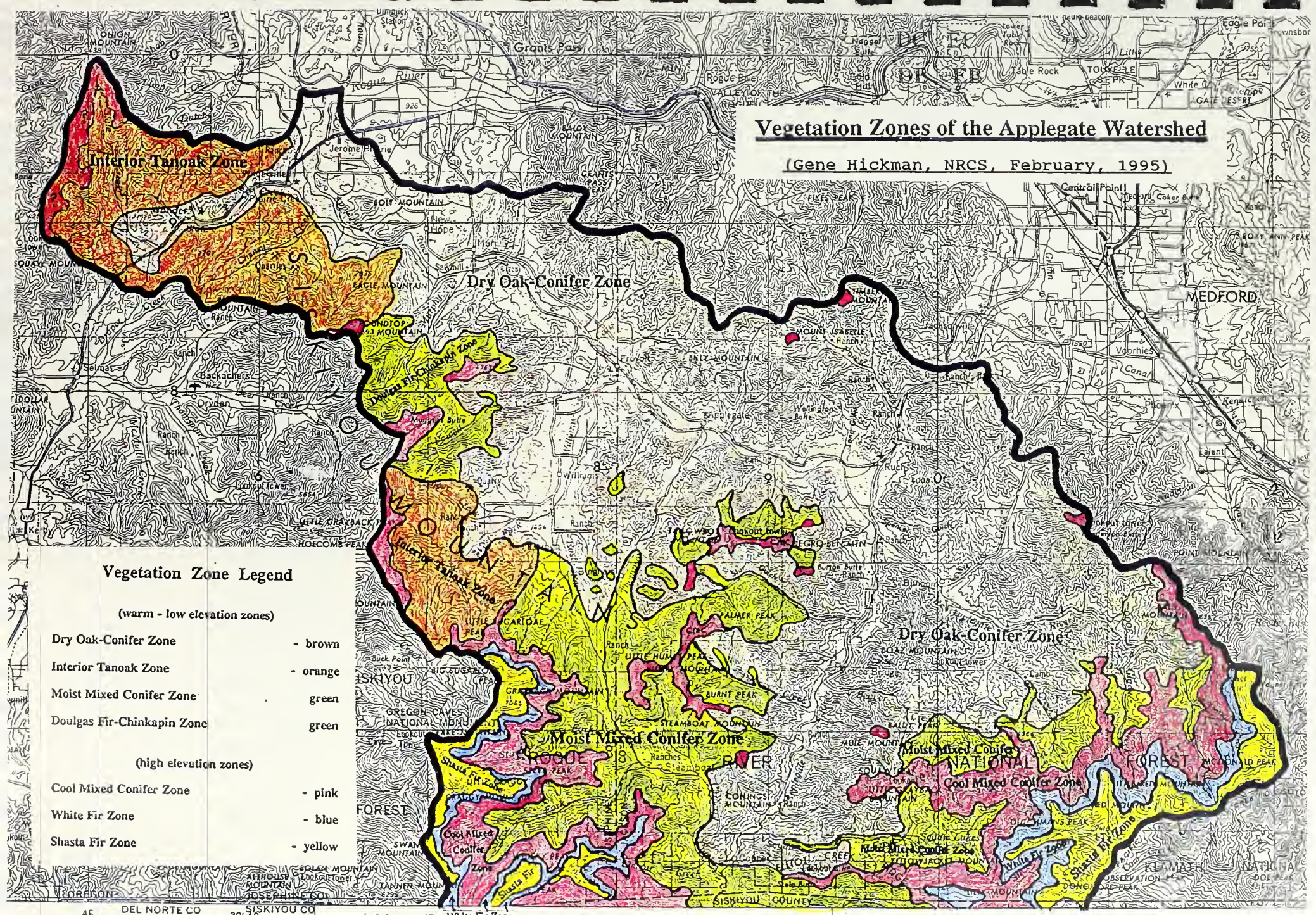
[22]Franklin and Dyrness, *Natural Vegetation of Oregon and Washington*, (Oregon State University Press), 1988 edition, p. 14.

[23]Ibid., p. 306.


Vegetation Zones of the Applegate Watershed
(Gene Hickman, NRCS, February, 1995)
Interior Tanoak Zone
Dry Oak-Conifer Zone
Moist Mixed Conifer Zone
Cool Mixed Conifer Zone
Douglas Fir-Chinkapin Zone
Shasta Fir Zone
White Fir Zone
Vegetation Zone Legend
(warm - low elevation zones)
Dry Oak-Conifer Zone - brown
Interior Tanoak Zone - orange
Moist Mixed Conifer Zone - green
Doulgas Fir-Chinkapin Zone - green
(high elevation zones)
Cool Mixed Conifer Zone - pink
White Fir Zone - blue
Shasta Fir Zone - yellow
MEDFORD
Grants Pass
Rogue River
SISKIYOU
SISKIYOU COUNTY
JOSEPHINE CO
DEL NORTE CO
CALIFORNIA
OREGON

"Zones" or "Associations"?

Vegetation zones provide a useful tool in examining change across the landscape. Their applicability to the land easily extends back in time to an era pre-dating European arrival to the region. The above-mentioned zones frame a set of relationships, and allow us to focus upon how these relationships have been altered by natural and human disturbances through the historic era.

On the other hand, the delineation of zones does have its limitation. For some ecologists, the set of relationships that zones frame is too varied, complex and wide-ranging to be accommodated by the model. To speak of a "mixed-conifer forest type" is to speak too generally. Franklin and Dyrness were aware of certain drawbacks to their own generalizations, particularly as these failed in site-specific application. "In fact," they wrote, "history and environmental complexity often make it impossible to distinguish zones, particularly in heavily disturbed valley regions."[24]

Atzet has attempted to overcome such limitations by developing a system of regional description based upon plant "associations." Eschewing the generalizations of the zonal model, Atzet has identified some 100 different "associations" in the Siskiyou Mountains. An "association" refers to a community of inter-related plant species. These species react with each other and their surrounding environment in consistent and predictable ways. Species not sharing an "association" fail to model such consistency. A "series" refers to an aggregation of associations, established with reference to the climax species of the association. The Douglas-fir series, in other words, represents a group of plant associations whose relationships occur within an area where Douglas-fir is the climax species. In this usage, "climax" refers to a theoretical end-point in plant succession.

Whereas "zones" tend toward static description of the land, "associations" strive to read the landscape in terms of vegetation potential. Into the hole that opens up in the model when it is "impossible to distinguish zones" steps the ecologist, able to classify sites by association. By reading the relationships between community members on the ground, ecologists determine what association they are viewing. With this information in mind, they are able to make comments regarding the future capability of sites. They are also able to make more specific and focused comments about relationships on the ground.

In this report, we will utilize zones to make general reference to landscape. Where appropriate, we will consider relationships within associations to explicate on-the-ground change read through on-the-ground relationships. Together, "zones" and "associations" are tools which allow us to comment upon vegetation change and potential across the landscape.

The First Humans

Is it a coincidence that the consensual date for the presence of resident humans in the study area approximates the onset of the Holocene epoch? "The archeological evidence for human occupation in southwest Oregon dates from about the last 10,000 years."[25] According to LaLande, the "first humans almost certainly were in southwest Oregon by at least 9,00-8,000 years B.P."[26] This being the case, we find the evolution of the ecosystems and humans in southwest Oregon to lie along a

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[24]Ibid., p. 131.

[25]Kate Winthrop, "Environment and Adaptation," n.p.

[26]LaLande, "Time Line," p.5.

similar horizon. It is interesting to speculate upon the formative influences these partners in evolution may have had on each other in this earlier era.

Contemporary discussion has focused upon fire as a medium of interaction between the earliest humans and the young environment. One commentator, C. R. Clar, writing before the recent paradigm shift in understanding pre-historic human/plant relationships in North America, has suggested that the native inhabitants showed very little interest in fire. He considers the notion that these peoples consciously used fire as a tool to be rather "fantastic."

> It would be difficult to find a reason why the Indians should care one way or another if the forest burned. . . It is quite something else again to contend that the Indians used fire systematically to 'improve' the forest . . . yet this fantastic idea has been and still is put forth time and again.[27]

In his classic study, *Fire in America: A Cultural History of Wildland and Rural Fire*, S. J. Pyne contradicts this view, taking his stand at the other end of the spectrum. Pyne believes not only that natives had a profound interest and understanding of fire, but that their use of fire virtually created the fire regimes and forest stands that exist throughout the Pacific Northwest prior to European settlement.

James Agee takes issue with Pyne on this point. He believes that Pyne pushes the ability of native cultures to utilize fire in a sophisticated manner to its "illogical extreme". Agee reacts against such broad generalizations. In his view, "the role of human beings in the ignition and spread of forest fires is important, but this importance varies from place to place and from culture to culture." Agee gives a general explanation:

> At least three common patterns of Native American burning were found in the Northwest: frequent burning in westside prairies and adjacent dry Douglas-fir forest, maintenance of small patches of open prairie for agriculture or hunting by coastal or mountainous tribes, and widespread burning by inland or 'plateau' tribes east of the Cascades.[28]

In the Applegate and Illinois Valleys specifically, evidence exists that natives burned their landscape for a variety of reasons. Included among them were: the control of pests; the stimulation of new plant growth for a wide variety of utilizations; the provision of browse, grasses and berries for game; the reduction of undergrowth as an aid for hunting; the hunting of insects; and the reduction of wildfire hazard, particularly in areas of residence.[29] A full exploration of these uses is beyond the scope of this paper.

Of greatest interest, however, is the role these fires played in environmental change in the region. Thus, it is less important to isolate anthropogenic fire from the evolution of plant communities, than to note its participation in that evolution. Indeed, since anthropogenic fire has been so intimately involved in the environmental history of the region,

> its role in the development and maintenance of pre-settlement plant communities cannot be segregated from that of fire from natural causes.[30]

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[27]C. R. Clar, *California Government and Forestry* (Sacramento: Division of Forestry, Department of Natural Resources, 1959), p.7.

[28]J. K. Agee, *Fire Ecology of Pacific Northwest Forests*. (Washington, D.C., Covelo, CA. Island Press, 1993), p. 55.

[29]Winthrop, "Environment and Adaptation," n.p.

[30]Wayne Rolle, "Little Applegate River Watershed Analysis," Specialist Report Summary 6.6, p. 10.

Entering the Historic Era

With this brief introduction to the pre-history of the study area, we stand on the threshold of the "historic" era. What "historic" means, in our context, is that the Applegate and Illinois Valleys were drawn into a new narrative, a narrative that will be told by the new arrivals to the region. Even among them, the new narrative will be the one told by the majority group, the one achieving hegemony among those new arrivals. These are the Euro-Americans. Prior to their arrival, the region lived a different narrative, or a kaleidoscope of different narratives, rooted in native culture in its relationships with an evolving environment. These narratives wove a tale of encounter for some ten thousand years. These tales, read in legends and tree rings, lost out in their contest with the tales of the historic era. Indeed, the tale of Euro-American "history" has rendered "pre-history" meaningful primarily as a prelude. And yet it is worth remembering that something was there—something was here—before "history" imposed its meaning on our landscape.

Discussions of change require points in time and place as anchors of perception. Regarding environmental change, we choose a place to focus upon and then consider change at that place over time. In this scenario, time and place are givens. The composition of the environment and the dynamics of change are the variables. What actually exists on the ground and what happens to it emerge as the key questions.

In this instance, we choose to focus upon the Applegate and Upper Illinois watersheds. We begin to consider change in this environment from the dawn of the historic era to the present. However, the further from the contemporary moment or the historic record we recede, the more difficult becomes the task of reconstructing what was actually on the ground. We can pose it as a question: What *was* the state of the land at the dawn of the historic era?

Contemporary discussion surrounding the state of the land at the dawn of the historic era often appears to be rooted as much in mid-twentieth century resource and environmental history as in any concerted effort to uncover the lay of the pre-Euro-American landscape. Consequently, regional landscape description tends to revolve around the merits or demerits of the generalized notion of a "blanket of old-growth forest" that covered the region. Advocates of this notion portray the region as home to a vast forest of staggering size and density. This ancient forest emerges as the dominant character of the landscape, a timeless, temperate rainforest of mist-hidden, moss-hung arching canopies and gentle brooks. Detractors of this notion argue that the region never possessed such a landscape. The land instead was primarily grassland and deciduous savannah, dotted here and there with localized groves of large coniferous trees.

Both of these generalizations may do violence to the reality of the land. They are both, in essence "primitive vignettes," presenting the memory of the land and its resident ecosystems as if they were museum displays.[31] And as in any museum display, representation is often determined as much by the attitude of the presenter as by the reality of the represented.

That such extreme positions co-exist in the reconstruction of regional history highlights the ease of generalization and polarization in the company of sparse historical record. One way to move beyond the dictates of contemporary discourse in attempting to reconstruct the environment of the early nineteenth century is to shift focus. With this in mind, let us follow an early nineteenth century inhabitant on a jaunt across the landscape: a female grizzly bear, rambling in, shall we say, what a later narrative would call, the year 1804.

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[31] R. Edward Grumbine, *Ghost Bears*, (Washington, D.C. and Covelo: Island Press, 1992), p. 27.

Ursus Horribilis

We are accustomed, in historic times, to think of the grizzly bear as an inhabitant of the remotest mountain terrain. At the time of European arrival, however, the grizzly bear was spread across North America from the Arctic Circle to central Mexico. Its scientific name *Ursus arctos*, subspecies *horribilis*, gives an indication of its reputation among the newly arrived Euro-Americans. The grizzly was a common participant in the life of the study area before hunting and loss of habitat drove it to extinction in the late nineteenth century, an experience shared by many other species by the late twentieth century. Perhaps we can resurrect her for a moment and follow her as she roams representative reaches of the study area.

Emerging from her south-facing den on a slope of some 30 degrees at the upper reaches of a mid-elevation drainage, say 4000 feet, the grizzly begins her springtime enjoyment of an endless smorgasbord of protein rich, green and growing vegetation. Growing plants contain their highest levels of protein in the weeks before they flower. The movement of the grizzly coincides with this exquisite timing.

At the mouth of her den, dug into the floor of the forest beneath crossed fallen logs, she gazes around her at a forest stand dominated by large Douglas-firs. Scattered Ponderosa pines drop puzzle-shaped pieces of bark to the forest floor. A few large madrone and a patch of black oak lie below her.

She descends south, then traverses east over a south running ridge. As she crosses the ridge, she emerges from the forest into south-eastern facing brush field. Madrone stand out from a brushy understory of whiteleaf chinquapin, wedgeleaf ceanothus, and deerbrush. Here, fire and aspect work to keep the slope free from conifer cover. Warily, she skirts this brush field, climbs again, and drops over a ridge into a north facing gully. Here the forest closes round again, still dominated by Douglas-fir, though a few white fir of equal size are present. In the gulch, the air feels cooler, wetter. Bigleaf maple and white alder root themselves along the riparian edge. Oceanspray and Cascade Oregongrape proliferate.

The grizzly moves along a shaded riparian area. Now she encounters a series of beaver ponds, and skirts above their boggy edges, stopping to root out a few grasses. At the lower end of this drainage, the slope mellows and the stream joins a larger drainage running north-south. Large white oaks dominate the landscape. Black oaks appear as well, and ponderosa pines stand in dispersed, age-stratified clumps, evidence of passing fire and age variation in resistant survivors.

As she approaches a sizable riparian bottom, a wide floodplain opens itself to the grizzly's ambling gait. Willow, cottonwood, ash and maple dominate the scene. A wide marsh buffers the meandering watercourse, settling water in low spots across the valley floor. Camas spreads across the area, its purple flowers still closed, soon to open. The grizzly begins to eat.

She passes through no yards, fenced pastures, or tilled fields. She sees no buildings. She crosses no roads, encounters no cars, or tractors. No planes fly overhead. No cattle, sheep, or goats compete for vegetation. She passes under no power or telephone lines, strolls by no realtor signs, distant radio towers, or fire lookouts. No reservoirs or ditches block her way. The waters flow with the fullness of spring, gold tucked in the gravel, tumbled along by the waters. No clearcuts present themselves on distant ridges.

She does have predators, of course—those that move on two legs. They normally give her wide berth. And she avoids them too. She and they fish the same streams during fall salmon runs. She and they harvest the same summer and fall berry patches, where she shares in the fruits of their selective burning.

Far to the north, other varieties of the two-legged creature are venturing out into their first Northwest spring. Meriweather Lewis and William Clark, along with their exhausted company, have wintered at the mouth of the Columbia and are beginning their eastward trek home. Mycorrhizal fungi are known to transport nutrients across a forest floor. Is it too much to imagine that they may have transported information south regarding these new arrivals? Could the grizzly have been forewarned concerning the staggering changes at hand? Perhaps generations earlier neotropical birds from Mexico carried a similar message north, survivors of Cortes' sixteenth century slaughter in the Valley of Mexico.

Anticipated or not, change came sooner rather than later.

CHAPTER ONE

CULTURAL TRANSITIONS: 1827-1856

The World Closes In

The first known whites to enter the Applegate watershed passed through the area early in 1827. They belonged to a party of Hudson's Bay Company trappers from Fort Vancouver under the leadership of Peter Skene Ogden. The group comprised some forty French-Canadian and Indian trappers, their native wives, and well over a hundred horses. They approached the region by traveling west along the Klamath River and then turning north over the crest of the Siskiyous into the Rogue drainage. It appears they largely skirted the southern and eastern edges of the Applegate drainage, passing north and then south again along Bear Creek. However, on April 7, 1827, Ogden and his men descended Onion Creek from the Rogue drainage, south of present-day Grants Pass, into the lower Applegate.[1]

The party explored and trapped the Applegate area for about a week. Ogden's trappers split up, presumably ranging widely across the landscape. There are no expansive descriptions of the Applegate region, nor of the activities of the trappers. It seems likely that Ogden himself ranged into the middle stretches of the Applegate watershed, where a camp was established near the mouth of Thompson Creek. While in the Applegate Valley, Ogden's journal shows a preoccupation with traveling on, and a lamentation on the lack of beaver available for easy trapping. "I now feel more than ever anxious to leave this Country being now more than ever fairly of opinion it is not a Beaver one nor was it ever intended it should be one."[2] These factors conspired to force the trappers from the Applegate back into the Rogue, where they established a camp in the vicinity of Evans Creek.[3]

Ogden's observations do permit us an early glimpse of the country adjacent to our study area. We know there were wolves in the ecosystem, since they ran off fifty of his horses. He was impressed with the oaks along Bear Creek—they were "nearly double the size of any I have seen this season." He wrote: "In all my travels, I have not yet seen a finer country for pasture." Along the Siskiyou Crest above Cottonwood Creek he noticed that "in many parts wood appears scarce and in other parts abundant Oak and Pine." The Rogue River appeared to him as "a bold stream and also a very strong one and both sides of the River well lin'd with Rocks and Stones." He remarked on the mildness of the winter, writing on February 9-10, 1827:

> This is certainly a fine country and probably no Climate in any Country equal to it, the Indians inform us the winter is now over and I am almost inclined to believe them from the singing of Birds of all kinds, grass green and at its full growth Flowers in blossom certainly entitles them to be credited but we are yet in February.[4]

The main reason for Ogden's journey into the Applegate region was to further the Hudson's Bay Company's resolve to create a vast "fur desert" surrounding the Company's lands along the Columbia River. Logic presumed that if there were no beavers to trap, there would be no American trappers to compete with the British in the expanding Northwest, and the region would remain British. Since 1821, when the English Parliament stepped in to consolidated the feuding North

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[1] Jeff LaLande, *First Over the Siskiyous: Peter Skene Ogden's 1826-1827 Journey Through the Oregon-California Borderlands* (Oregon Historical Society Press, 1987), p.105.

[2] Ibid., p.108.

[3] Ibid., p.108.

[4] Ibid., quotes from pp.48, 54, 108.

West Company and Hudson's Bay Company under a single title, the Company had proved useful in furthering British goals. We cannot know the success with which Ogden and his men were able to fulfill their goal regarding the creation of a beaver desert. But although Ogden at times appeared less than happy with the take of beaver, his journal does record taking well over 1,500 pelts, which was the stated harvest goal for the trip.[5]

During the next two decades, the only Euro-Americans to visit the study area were the several parties who entered the periphery and a yearly flow of fur trappers from the Hudson's Bay Company. The environmental impact of these groups seems minimal, except in two regards. In the first place, obviously, beaver were removed from riparian communities. It is quite likely that this impact on the region ceased in the latter part of the 1840's. The fur trade in general was largely driven by the beaver hat fad raging in Britain and on the European Continent. With the saturation of the market, and the reports of trapped out beaver throughout the range of the Hudson's Bay Company, this fancy from the borders of the known world fell from favor, and fashionable people looked elsewhere for their headwear. The second impact was the channelization of streambeds and consequent alteration of streamside environments due the removal of the beaver. It is quite likely, however, that this impact was soon over-laid by a similar consequence of mining, whose impact lay just around the corner.

The impact upon the environmental history of the study area is hard to establish in quantifiable terms. This situation is exacerbated by the lack of HBC record keeping. It is known, however, that at the peak of the trade between 1834-1837, "nearly half a million skins were handled by the Hudson's Bay Company at Fort Vancouver."[6]

Establishing the Route

Ogden's journey was not atypical of the first Euro-American encounters with the region. It was followed by a series of Hudson's Bay Company ventures into southern Oregon. At the same time that Ogden was bemoaning his fate in the Applegate region, Michel Laframboise was guiding a Hudson's Bay Company group under the leadership of Alexander McLeod through the Umpqua. Indeed, his route overlapped with Ogden's at several points, including upper Evans Creek and along the South Umpqua. At this latter location, Ogden's men found not only the tracks of many trappers, but "abundant evidence that the river had been cleaned of beaver."[7] It would appear that the patterns and legacy of the Hudson's Bay Company evidenced by Ogden in the Applegate were replicated across the southwest Oregon.

Other recorded Hudson's Bay Company journeys through southwest Oregon include LaFramboise in 1833 and several other occasions, and John Work, who camped along Bear Creek in September of 1833 with a company of some sixty-three men, women, children, and Indian guides.[8] These represent just two of many expeditions the trading company sent through the region in the 1830-1840's. Together, these diverse groups served to establish a known route through southern Oregon at the eastern boundary of the present study area.

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[5]Ibid., p.114.

[6]T. O'Donnell, *That Balance So Rare: The Story of Oregon* (Portland: Oregon Historical Society Press, 1988), p.29. This figure would include all or most of the harvest from the H.B.C.'s Columbia Department, the vast region now encompassing Oregon, Washington, Idaho, western Montana, and British Columbia.

[7]LaLande, *Siskiyous*, p.99.

[8]Stephen Beckham, *Requiem for a People: The Rogue Indians and the Frontiersmen* (Norman, OK: University of Oklahoma Press, 1971), pp. 30-32.

Many of the groups were large and of varied membership—Ogden himself may have traveled with his wife. In some ways, these groups imitated the lifestyle patterns of the natives they encountered. They moved across the landscape as nomadic hunter-gatherers, reliant upon the land for sustenance. They regularly engaged the natives in trade relations. Their obligation, however, was not to the land and its long-term diversity, but to the furtherance of the commercial and imperial goals of their employer, along with whatever personal goals they may have had. As to their relations with the Indians, the experiences of the Hudson's Bay Company in southwest Oregon stand in marked contrast to that of the later American settlers in that they were largely non-violent.

Passing Through

When Jedediah Smith and fourteen other men moved some three hundred pack animals loaded with furs up the southern Oregon coast in 1828, he was not long out of a Mexican jail in California. Smith moved rapidly and with recklessness across the land, losing animals to rivers and traveling hungry. In the vicinity of the lower Umpqua, Smith and company were attacked by Kelawatset Indians. Most of the party were killed. The previous year McCleod and company had passed through the region and established friendly relations with the same Indians.

In 1834 and 1837, Ewing Young pushed cattle, horses and mules along the Hudson's Bay Company trail enroute from the Sacramento Valley to the Willamette. He was not only interested in these drives for reasons of personal economic gain, he was also interested in promoting the self-sufficiency of the Willamette region. His goal was to allow American settlers complete independence from the company, to show that Americans "could settle in the Willamette Valley with an assurance of being self-supported."[9] With the establishment of a viable cattle population, this possibility became apparent and the Willamette region began a new era of development. Both the 1834 and 1837 journeys through southwest Oregon were marked by skirmishes and tension with the natives.

The reasons behind these early hostilities are perhaps matters of speculation. However, it could be presumed that natives might view a nomadic band of hunters and traders of differing age, sex and ethnicity as posing an essentially different threat than a small band of men driving seven hundred cattle over the Siskiyou summit or three hundred up the coast. Walling relates that the English were more successful in the fur trade due to the overwhelming percentage of French-Canadians and half-breeds involved, people known to display a high level of professionalism and expertise. The Americans, on the other hand, were more interested in the drinking and rowdiness of the lifestyle than the need to run a successful company.[10] J. Ross Browne describes the earliest Americans as "a wild, reckless and daring race of men, trappers and hunters, whose intercourse with the Indians was not calculated to afford them [the Indians] a high opinion of the Americans as a people."[11]

By the time Young drove his first band of cattle over the crest, according to Beckham, some 250 British and Americans had already traversed this "Siskiyou Trail" between Oregon and California.[12] It could be that these numbers were already causing concern among the natives. Or that the natives were aware of settlement activity in the Willamette and perceived the connection between these large drives and their own future in the region. Or that the ravages of disease evidenced in original contact with natives across the continent had already begun to show itself in this region as well. At any rate, the encounters between these earliest Americans and the natives

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[9]A. G. Walling, *History of Southern Oregon* (Portland, OR: A. G. Walling Printing Company, 1884), p.131.

[10]Ibid., p.125.

[11]Ibid., p.192.

[12]Beckham, *Requiem*, p.32.

stand in marked contrast to those between the earliest Hudson's Bay Company trappers and the natives, and anticipate an era only a few years distant when all manner of civil relations failed.

A Well Situated Country

If the earliest travelers through the region were consistent in their lack of attention to detailed record keeping and the production of historically retrievable information—particularly with regard to descriptions of the Applegate and Illinois drainages—the Emmons party of the Wilkes Expedition marked a significant step toward the cataloging of the land.

Officially termed United States Exploring Expedition, it set out from Norfolk, Virginia on August 18, 1838, with 346 men under the command of Lieutenant Charles Wilkes. They were charged with the exploration of the Antarctic, South Pacific and Pacific Northwest. Although a discussion of the larger expedition is beyond the scope of this report, it is interesting to note a comment by Wilkes from 1849. After nearly a decade of mid-nineteenth century exploration and reflection, he anticipated the contemporary discussion surrounding the "Pacific Rim". According to Wilkes, "no country is so well situated to communicate with all parts of the Pacific Ocean as Oregon."[13]

By the spring of 1841, the Wilkes Expedition had reached the Pacific Northwest at the mouth of the Columbia. Their arrival was perhaps less than glorious, as Lieutenant George F. Emmons, sent ahead from Hawaii by Wilkes to scout the Columbia, had run aground at the mouth of the Columbia and could only stand ashore and watch as his ship came apart against the rocks.

By August, the whole of the expedition was reunited at Fort Vancouver. Emmons was put in charge of an overland exploration south into California. With him went a surveyor/cartographer, naturalist, artist, two botanists, geologist, surgeon, and general support, including native guides. Also in his party were a small band of settlers, including four women and eight children. The travelers numbered thirty-nine people and seventy-six horses or mules. The exploration generated a wealth of information and carefully recorded observation. As their route adhered to the Hudson's Bay Company route, by now well established, they did not enter the study area, and consequently, did not generate specific information on the study area. Nonetheless, "this contingent perhaps did more to publicize the region and its character than any of the previous land-based white parties put together."[14]

Applegate's River

The tide of British imperial power in the Pacific Northwest began to turn with the coming of missionaries from the United States in the 1830s.[15] However, more than missionaries endeavoring to "Christianize the frontier" were required to "Americanize Oregon". This task required settlers, and many of them.

Among these "Americanizers" were Jesse and Lindsay Applegate and their families, who arrived over the Oregon Trail in 1843 in a wagon-train which consisted of some "875 persons, 295 of whom were men over sixteen years of age."[16] In 1846, these two, along with Levi Scott, became the trailblazers of an emigration route into the Willamette Valley from the south.

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[13]Wilkes, *Western America*, 108.

[14]Beckham, *Requiem*, p. 62.

[15]C. A. Schwantes, *The Pacific Northwest: An Interpretive History* (Lincoln and London. University of Nebraska Press, 1989), p.15.

[16]Walling, *History of Southern Oregon*, p. 143.

Their reasoning was two-fold. First, the standard Oregon Trail that followed a string of Hudson's Bay Company forts and floated down the Columbia was a rugged trapper and trader route, less suitable for the wagons and families of settlers. Discontent with the standard route was commonplace, and alternative routes had already been considered. Added to this general discontent was the Applegate family's experience along the Oregon Trail. Both Jesse and Lindsay had lost ten-year-old sons to a river-crossing near the Dalles during their 1843 journey.

A second reason to establish an alternate route grew out of the political climate of the time. Great Britain and the United States were at odds over where to establish the border between their jurisdictions. With the Hudson's Bay Company in control of the only land routes into Oregon and in league with many of the Native Americans along the way, a safer passage seemed prudent. In Lindsay Applegate's own words, "in case a war should occur and Britain prove successful, it was important to have a way by which we could leave the country without running the gauntlet of the Hudson Bay Company forts and falling prey to Indian tribes which were under British influence."[17]

In June of 1846, the Applegate party left the Willamette, tracing a route toward Fort Hall, Idaho. By the end of July, they had passed through the Rogue Valley. They followed the standard Siskiyou Trail into Bear Creek and, heeding the advice of a group of mixed-race French-Canadian and native trappers, headed east over the southern flank of the Cascades up the Emigrant Creek drainage. From there, they made their way through present-day Greensprings country into the Klamath Basin and on over the dry Great Basin country to Fort Hall. By late August, the first settlers were traveling west across the Applegate Trail.

The impact of the so-called Applegate Trail—at the time more commonly called the "Southern Oregon Emigrant Road"—upon the study area was minimal in its first few years. Settlers used the trail chiefly to pass through the region, not to stay. Two factors seem to have been at work. In the first place, the Rogue region displayed no infrastructure able to support immigration. The were no settlements, no agriculture, no discovered resources. Although the agricultural potential of the Bear Creek area was surely recognized, there was no market for goods. A second factor was the continued presence of a hostile native population. This discouraged subsistence settlement perhaps as much as the lack of an agricultural market.

In 1848, Lindsay Applegate was again one of those passing through the area, this time heading for the newly-discovered gold fields in California. From a divide somewhere above the Rogue River near present-day Grants Pass, Applegate and party looked out and saw what some said was a bend of the Rogue. Applegate claimed it was another stream altogether. His comrades "referred to it jestingly as 'Applegate's River.'"[18] Time has dignified the appellation

Forty-Niners

The same promise of gold in California that attracted Lindsay Applegate drew a stream of men from the Willamette Valley through the Rogue Valley and left the fur era to history. O'Donnell has estimated that two-thirds of "the able-bodied men of Oregon" headed to the California fields.[19] Most of these would have traveled the Siskiyou Trail through southwest Oregon. One consequence of this southern passage was a new look at the Rogue River and Bear Creek drainages.

Virginia Josephine Rollins was among "the able-bodied men of Oregon" who headed south. She and her father, Lloyd Rollins, had left Missouri in 1850 for the California gold fields. They got to the Humboldt desert of Nevada with weakened ox teams and decided to head for Oregon instead.

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[17]Ibid., p.303.
[18] Olga Weydemeyer Johnson, *They Settled in Applegate Country*, p.2.
[19]O'Donnell, *That Balance*, p.49.

They wintered in Oregon City and the next spring they headed south "for the mines of California." At the Rogue River, some natives informed them of "very rich mines a few days travel down the river." A few of their party resisted this advice and turned for California. The rest stopped to explore the mines with the help of some friendly Indian guides. They discovered "good surface mining there on what was supposed to be Illinois Creek."[20]

Unfortunately, a group of Native Americans launched an attack on their company from which they had to be rescued by a "mounted company of volunteers coming from where Yreka is now." When the volunteers headed home, the Rollins company decided to follow along. In a letter Josephine Rollins wrote in 1909, she said: "I was the only woman in the entire company. It must be remembered there were no roads, towns or counties there in these early times, and I was the first white woman in that section of Oregon." Josephine Creek, one of the first gold-mining areas in southern Oregon, was named for her as was, of course, Josephine County.[21]

Ferrymen and Other Loners

Though the region saw much passage, limited exploration, and tentative prospecting in 1848, 1849 and 1850, there were, according to Walling, still no settlers or "houses or cabins between the South Umpqua and Yreka". "It was too isolated for the abode of an agricultural community, and possessed the disadvantage of being occupied by hostile Indians, whereas the Willamette, whose farming industries were the most extensive on the coast, was devoid of disaffected aborigines."[22] Soon enough, however, the commerce of travel, the lure of gold, and the eye of the would-be agriculturist succeeded in bringing settlement to the region.

In 1850, Joel Perkins re-located from Yamhill County to the banks of the Rogue River near the present site of Grants Pass. In 1851, he built himself a log house, reputedly the first permanent Euro-American dwelling in southern Oregon.[23] By that summer, Long's, Evans', and Perkins' ferries were established on the Rogue River to aid travelers. Also that summer, Judge A.A. Skinner filed the first Donation Land Claim in southern Oregon. Skinner was the new Indian Agent sent by Superintendent Dart to quell difficulties arising from the encounters between natives and travelers in southern Oregon. "Skinner came bearing gifts and government sanction for his policies."[24] He was also savvy enough to choose a prime piece of agricultural land near present-day Central Point for settlement. Skinner's property became the focal point for safety and settlement in the region. On New Years Day of 1852, according to Walling, there were 27 or 28 people living in the Rogue Valley.[25]

Going For the Gold Boom Times in the Rogue Valley

It was gold, a substance buried mysteriously in the earth, requiring backbreaking energies exerted in the scraping and digging and hauling of the earth, that accounts for the sudden, startling flow of alien human beings into the study area.

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[20]Dororthy Francis,*History of Josephine County*, p.8.

[21]Ibid., p.8.

[22]Walling, *History*, p.336.

[23]A. G. Walling, quoted in Edna May Hill, *Josephine County Historical Highlights* (Grants Pass: Josephine County Library System, 1976), p.127.

[24]Beckham, *Requiem*, p.68.

[25]Walling, *History*, p.337.

Unearthing The Applegate

It was either late in the year 1851 or early in 1852 when James Cluggage and James Poole found rich placer deposits of gold on Jackson Creek, a tributary of Bear Creek in the Rogue Valley. Gold had been discovered in the region before, along the Applegate and Illinois river systems, but the Jackson Creek strike was the kind that excited fantasies of great wealth and riveted the attention of gold seekers up and down the west coast, and beyond. It had taken a quarter century for the settled population of non-native Americans in the Rogue Valley to reach several dozen. Overnight, the greater Rogue Valley saw an influx of thousands. Within a year, perhaps a thousand miners moiled for gold in the Applegate/Illinois study area alone.

In February, 1852, "a trading post was opened in a tent by Apples and Kearney, packers from Yreka." By March, several hundred men had already arrived and the bustling town of Jacksonville was taking shape. The first cabin had already been built by W. W. Fowler. Whip-sawn lumber was available at $250 per thousand board feet. By mid-summer, "not less than a thousand miners had arrived."[26] Most of these came from California.

This boom mentality was responsible for bringing the first settled inhabitants (some for very short duration) into the study area. As claims filled Jackson Creek, Wagner Creek and other streams in the Bear Creek drainage, miners spilled over the relatively low divide into the Applegate drainage. The natural line of travel would land them in Forest Creek, which before the end of 1852 was "invaded by a small army of miners."[27] Known during the 1850s as Jackass Creek, this drainage would become the earliest center of mining activity in the Applegate Valley.

Along with the miners came entrepreneurs who understood the usefulness of gold as a medium of exchange. They planned to be present with an array of services that might appeal to hard-working, newly rich males in an atmosphere of social isolation. Within a few years, these services were clustered around one of the Applegate region's first commercial hubs, called Logtown, after its leading citizen, Frank Logg. Logtown was located near the confluence of Poormans Creek and Jackass Creek.

By 1854, it seems, most of Poormans and Jackass Creeks were being heavily worked all the way down to where they meet the Applegate River in the vicinity of present-day Ruch. It's likely that within the first year or two after the Jackson Creek discovery, miners had also ranged the length of the Applegate River and most of its tributaries in search of the color of gold. None of them was quite as lucky and unlucky, though, as James Sterling, who with his friend and mining partner Aaron Davis uncovered a very rich deposit on a tributary of Sterling Creek in late spring, 1854. In the few days between their discovery of the and Sterling's return to stake his claim, the word got out. When Sterling arrived on the creek that was to bear his name, it was "staked from source to mouth and rim to rim. Blanket tents were everywhere and the miners were busily stripping their claims or sinking shafts in the flats." His partner, Aaron Davis, was among the lucky ones who beat him to it.[28]

Sterling turned down the token claim his erstwhile partner offered him and headed for his farm back in the Bear Creek Valley. In due time, he moved to northern California where he mined near the Oregon border. He was seen from time to time in Ashland. One could wish to know the motives of those who named in his honor both the creek and the town that sprang up virtually overnight to service one of the Applegate country's richest strikes.

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[26]Walling, *History*, pp.360, 338.

[27]Walling, *History*, p.338.

[28]F. D. Haines Jr. and V. S. Smith, *Gold on Sterling Creek: A Century of Placer Mining* (Medford, OR. Francis D. Haines, Jr. and Vern S. Smith, 1964), p.10.

By October, 1854, there were perhaps fifteen hundred persons in and around Sterlingville, many of them drawn by tantalizing stories of the strike carried in northern California newspapers. George West arrived about that time, and found "hotels, saloons, stores, bakers and butchers as well as a gambling house," according to Sterlingville's historians.

The town was on the west side of the creek while most of the mines were on the east side in the flats in the area now occupied [as of 1964] by the Sterling Mining Company reservoir, the Duncan place, the mining company headquarters and extending up toward the old Graupner place.[29]

Hostilities between the newcomers and native peoples in 1855 slowed mining activity somewhat. But by early 1856, Sterlingville was thriving again, with up to eight hundred inhabitants and perhaps thirty buildings. Then, as so often happens in southern Oregon, a winter promising to be wet in its early weeks turned dry, depriving the miners of the water they needed to wash gold out of dirt. Some of the miners organized to survey and dig a ditch to bring water from the Applegate River to the diggings around Sterling Creek. When it proved too difficult a task, Sterlingville began its decline. Gradually, get-rich-quick surface mining gave way to "drift" mining, the practice of driving tunnels into streambanks and hillsides.[30]

Shaft mining requires time and capital, and attracts people with the patience that bodes well for longer term investment in community life. Most of the placer miners moved on to other, more easily worked gold fields. By 1860, the federal census found only 123 residents in Sterlingville, and thirty unoccupied buildings.[31]

The Illinois Valley

In the year prior to the Jackson Creek strike, exploring miners had already found gold in the western sector of the study area. The first known trail into the Illinois Valley from the west was opened in early 1851, bringing Americans in from the coastal settlement of Trinidad, California, and over the Siskiyous above present-day Happy Camp. Before the end of that year, placer miners were at work on Josephine Creek and Canyon Creek, tributaries of the Illinois River.[32]

After the Jackson Creek strike, in 1852, exploration of the Illinois Valley increased dramatically. Major gold strikes were made on the alluvial flats of the upper Illinois River and along the streams and gulches that fed the East Fork of the Illinois River. Althouse Creek saw the most intense activity, supporting over a thousand miners along ten miles of its length for perhaps fifteen years. Neighboring Democrat Gulch was similarly rich.[33] Many miners who had been discouraged by the earlier modest finds now returned, hoping their experience in the area and the emerging infrastructure would give them better luck.

At the same time, a more direct route from the coast into the valley was being developed. A trail party was outfitted in 1852 at a trading post operated by Walling, Northcutt, and Bell on Althouse Creek, and by September it had opened a trail down the Smith River to the new settlement of Crescent City. Gold-seekers poured into the Illinois Valley, and explored virtually the farthest reaches of the study area.

By 1853, Browntown was a thriving mining center on Althouse Creek, serving the Althouse Creek, Sucker Creek and Democrat Gulch digs. One of its log buildings doubled as gambling

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[29]Ibid., p.23.

[30]Ibid., pp.29-30.

[31]Ibid., pp.30-31,35.

[32]Willard and Elsie Street, *Sailors' Diggings* (Wilderville, OR: Willard and Elsie Street, 1973), p.2.

[33]Hill, *Josephine*, p.5.

hall/saloon and fort in case of Indian raids. According to one account, "the famous Lottie Crabtree, from San Francisco, danced to such an appreciative audience that she was showered with piles of coins at her feet."[34]

The upper Illinois Valley gold fields were soon known, collectively, as "Sailors' Diggings." (Reflecting an early tendency for sailors from Crescent City to travel into these areas hoping to share in the new-found wealth of the land-lubbers.) Whole towns sprang up virtually overnight at Allen Gulch, near present-day Takilma, and at Waldo, named for a California politician at a time when a border survey had yet to prove that Sailors' Diggings was not in that state. By 1856, 500 people were living in Waldo. Two of Waldo's leading citizens, Marhoffer and Sann, anticipated a late twentieth-century growth industry by opening (micro-)breweries in both Waldo and Crescent City by 1857. When H. M. Hart advertised his Waldo Springs Hotel in the Crescent City Herald in 1854, he boasted that his table was "supplied with all the luxuries that the country affords" and his bar with "choice imported LIQUORS and CIGARS."[35]

By 1858, Waldo had four hotels (one for Chinese only), a livery stable, blacksmith shops, saloons, a bowling alley. Somebody had managed to bring a pool table in from the coast. Dorothy Francis says that at one time as many as 3,000 people worked and traded in the Waldo vicinity. She reports that four hundred Chinese had Josephine County mining licenses in 1858.

The winter of 1858 brought heavy snows, driving some of the miners out of the region altogether, reducing supplies from the outside to the point where "a pinch of gold was being traded for a pinch of salt." Once the snows melted, miners flowed back in by the hundreds. By one estimate, there were fifteen hundred miners in Waldo in 1859.[36]

The Mining Life

Haines and Smith, Sterling Creek's historians, offer us the portrait of the miner's habitation on the land left by one of the earliest Applegate Valley miners, James M. Sutton:

> The cabin was a commodious structure eight feet wide and ten feet long. The logs that composed it had been hacked down by brute force using the old root axe. As this was the only tool that the partners had for carpentry, the resulting structure was lacking in elegance. A few nails driven in the wall of the cabin served to hold the gum boots and the clothes of the men when they came in at night.
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> The furnishings of the cabin consisted of a rude table, benches and bunks. The bunks were built against the walls, saving in space and in construction time and were filled with fir boughs for comfort and warmth. The fireplace was a crude structure of mud and sticks rising from a stone hearth in one end of the cabin and served for heating and cooking both.
>
> The cooking was as primitive as the arrangements for shelter. A camp kettle and a frying pan were the sole utensils employed and proved sufficient for the culinary activities of the men. The diet was beans and bacon. (This was augmented by bread purchased from the bakery.) A batch of beans was prepared once or twice a week. The pot of beans was warmed slightly for breakfast. If the men were not too tired from the day's work, it was warmed again in the evening. Frequently the toll of the day's activity was so great that the men could not bother to heat the beans at night but gulped them down cold from the pot.

After weighing their day's take in gold, and hiding it in a hole bored with an auger into one of the logs of the cabin, the men

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[34]Ibid., p.62.

[35]Street and Street, *Sailors' Diggings*, pp.8,16.

[36]Francis, *History*, p.59.

> just crawled into their bunks. There was no time for night life and no energy even if there had been time. They had to be up at work on the claim by dawn the next morning. The mining season was short and no one could afford to waste a minute of it.[37]

Most men worked in partnership with one or several others. But in time, new methods of organizing human labor were developed, and large groups of men worked single claims as wage laborers for an entrepreneur or company. Sutton observed that these men worked their hours, and no more. It was these men, he thought, who comprised the rowdy night life of the saloons and dance halls and gambling houses of boom towns like Sterlingville and Waldo.[38]

The miners brought to the land, and often left on the land, the basic equipment required for sifting gold from dirt. An Althouse Creek miner offered his equipment list: "a five-pound pick, a long handled shovel, two long, twenty-pound crowbars, one three-pound Collins stone hammer, twenty pounds of 10d nails, two good chopping axes, one hatchet, twelve square feet of tom irons, twenty pounds of inch rope."[39]

It is startling how little, in terms of human artifacts, one can find of these mountains of equipment, tent cities, log cabins, and ramshackle towns today. Natural processes and human scavengers have made the material remains of once thriving communities entirely disappear. According to LaLande, recurrent flood damage has washed away the flattened areas once excavated into streamside slopes as tent- and cabin-sites, and most of the pots and bottles and nails and tools that were once abandoned there. Later mining enterprises came along, re-worked the ground, and destroyed signs of the earliest mining. In addition, "written documentation of the Forest's mid-nineteenth century mining is almost nonexistent. . . . Due to the vulnerable location-type, there are probably only a small number of these sites left in an undisturbed condition."[40]

If material debris is hard to find, it may be easier to speculate on debris of a different sort deposited in the minds and spirits of the human beings who witnessed these years of frenzy, who lived the contrasts, the sudden reversals, of dream and reality, profit and loss, boom and bust. Haines and Smith, Sterling Creek's historians, offered a viewpoint:

> The Pacific Northwest has never recovered from the gold rush. There is still an abiding belief in the big bonanzas. . . . Every town has its great bonanza just waiting for the capital to develop it.[41]

Mining's Reach

Within a year or two of the strikes on Jackson and Josephine Creeks, the mining community had arrived at a fairly precise understanding of the range of gold bearing grounds in southern Oregon. The gold fields were bounded on the north by the North Umpqua and by Bear Creek on the east. They ran south into the Yreka country of northern California and west across the Rogue basin. Within these boundaries, exploration was extensive. The study area, it turned out, was at the heart of gold-bearing country.

It didn't take long for miners to carry out at least a cursory examination of virtually the entire Applegate and Illinois watersheds in their search for "color". After a general tour of southern

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[37]Haines and Smith, *Gold*, pp.17-18.

[38]Haines and Smith, *Gold*, p,18.

[39]Jesse Lee Gilmore, *A History of the Rogue River Valley, Pioneer Period, 1850-1862* (Ph.D. Dissertation, University of California, 1952), p.53.

[40]Jeff LaLande, *Outlook: The Forest's Past*, p.16.

[41]Haines and Smith, *Gold*, p.2.

Oregon in the spring of 1855, the editor of the *Oregonian* reported mining activity on all the streams from Jacksonville to Althouse.[42]

The earliest activity was concentrated in the following stream systems: the Applegate River, Sterling Creek, Jackass (later Forest) Creek, Murphy Creek, Slate Creek, Josephine and Canyon Creeks on the western border of the study area, the Illinois River near Kerbyville, Deer Creek, Althouse Creek, Democrat Gulch, Sucker Creek, Sailor Gulch (aka Sailors' Diggings on the East Fork of the Illinois), Allen Gulch and Scotch Gulch. In effect, by the end of the earliest era of mining, all sub-watersheds of the study area had experienced concentrated activity except Williams Creek, where activity started just a bit later, and the higher elevation reaches of the Upper Applegate drainage, where, for instance, the Steamboat (Carberry Creek) strikes awaited.

Initial mining sites were close to streams, at low gradient and low elevation. Although miners did explore the higher elevation country, fueling tales of hermit-like mountain miners hidden away in the farther reaches of the study area, these remote regions did not see concentrated activity till a later date. Sailor's Diggings lay at approximately 1600 feet; Althouse Creek, claimed solid for over ten miles by 1853, likely saw activity above 2,400 feet; Jackass (Forest) Creek, subject to a heavy population of miners, may have seen mining up to 3,000 feet; Sterling Creek, claimed from the mouth to the source by 1854, would also have seen placer disturbance above 3,000 feet. These locales likely represented the highest elevations of concentrated early mining.

How the Miners Met the Land

We've lingered over the first years of gold mining in the Applegate and Illinois country. We've wanted to allow the reader's imagination to begin forming a picture of the explosive entrance and stunningly swift probing of these two isolated watersheds by a new type of human, the seeker after gold. New Year's Day, 1852, found several dozen Euro-American adventurers, and hopeful settlers coexisting tentatively with a regional native population of perhaps several thousand. New Year's Day, 1853, found the several dozen multiplied into several thousand, and not just Euro-Americans, but Hawaiians and Chinese and Mexicans as well,[43] scrutinizing the farthest reaches of the tiniest streams and remote gulches of the Siskiyou ranges, fondling the dirt with an exaggerated tenderness, scraping back the topsoil, digging pits ten and fifteen feet deep in every vacant stretch of alluvial flat, scarring the streambanks and hillsides, moving dirt toward water and water toward dirt and mixing them together, aided by a score of seat-of-the-pants, jerry-rigged technologies. A new presence on the land, and a new land taking shape.

Gold mining in the first decade in southern Oregon was placer mining. Placer deposits refer to gold held in suspension in sand or gravel deposits laid down by rivers or glaciers. These contrast with lode deposits, where gold is embedded in fissures or other gaps within surrounding rock. Placer deposits in the study area were generally located in riparian bottoms, or in alluvial deposits along river terraces or lower slopes, and occurred most commonly at lower elevation.

The placer miner's task is relatively simple to describe, although backbreaking to perform. The task is to sift through dirt to find the specks or nuggets of gold that are hidden in it. The logic of efficiency requires that you be asking yourself, at every moment: how can I move more of this dirt, sift through more of this dirt, more and more quickly, with a greater and greater recovery rate? Toward this end, innovations were constantly being made. Over time, what began as almost a gentle fondling of the earth ended as a violent and disruptive assault on the landscape, surpassing what even the turbulent floodwaters, of the scale recorded in historic times, can do to the contours of a mountain stream.

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[42] *Oregonian*, June 23, 1855, pp. 1-4.

[43] LaLande, *Outlook*, p.16.

Entry-level miners panned for gold. They filled their shallow, slope-sided pans with dirt, dipped one edge into the water, and swirled the water and dirt about, allowing the lighter, finer dirt to wash over the sides. The heavier stuff settled to the bottom, and some of the heavier stuff was gold. A miner who spent a day doing this could move a yard of dirt by sundown.[44]

An early innovation was a cradle or rocker, a rectangular box, open at the lower end, mounted on rockers. The miner shovels dirt into a screen suspended above the upper end of the box, separating out the biggest particles and dumping them to the side. The finer gravel sifts through. The miner dips water into the upper end of the box, rocking it with his other hand, washing the gravel down the length of the box, across the cleats or "riffles" built into the box's floor. The riffles catch the gold as the rest of the sand and gravel washes out the lower end.[45]

Naturally, the first miners in an area worked the stream banks, where the water that anchored the entire mining process was readily available. But gold was also to be found in rich alluvial deposits, out on the flats and lower slopes away from the river's edge. The first impulse was to dig holes and carry the gold-bearing dirt in buckets or wheelbarrows to the stream for washing in pans and rockers. Soon enough came the next impulse, to bring the water to the dirt instead of the dirt to the water. Ground sluices were dug, channeling water from upstream to the digs on the flats, feeding sluice boxes into which dirt would be shoveled. Flumes would bring the water across creeks, so as to avoid the mileage required to follow the land's contours. A miner on Althouse Creek sent this account to the Crescent City Herald in 1854:

> [At first] companies mostly consisted of 4 men, occupied 2 hours in pumping the water out in the morning, after this one in the hole, getting out the dirt and putting it in a bucket, another hauling it fifty feet to the creek; another rocking it through a cradle, and another pumping. But now we ground sluice within one foot of the level of the creek, one doing the work of 8 men with a shovel and pick, and the dirt has never to be moved again as was the case in stripping by hand; next we keep a perpendicular face on where we work, for six feet or as low as we can throw into the sluice, throwing all in except such sized rock as the force of water in it will not carry out; the balance of the rock amounting to double the bulk of the dirt thrown into the sluice, is put on handbarrows and carried on a running stage, over the heads of the men on the bed rock, and emptied on their rock pile, making the height of both together 10 or 12 feet; then we have three men stripping from 7 to 8 feet below the first stripping, and throwing the dirt into large flat boxes on the first stripping; the rocks, such as will not go through the sluice are put behind them; and the men on the first stripping throws it out of the boxes into the sluice. In the summer we keep a man to tail the sluice; the water is kept out by water power.[46]

One of the earliest ditches was dug by the Sailors' Diggings Mining, Water and Milling Company, in August 1852. "It brought the water from the east fork of the Illinois River to the gulches where the gold was lying in the yellowish dust or mire -- depending on whether it was the dry or wet season."[47]

As early as 1855, heavily used areas were already experiencing over-worked surface dirt. The continual innovation of new technologies became urgent in order to access new supplies of gold-bearing material. Very soon, at places like Sailors' Diggings, "there was little opportunity for the independent miner in the diggings, unless he had sufficient money to obtain a long sluice, with all the fixtures."[48] The same held on the Little Applegate River, just above the main Applegate River,

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[44]Street and Street, *Sailors' Diggings*, p.27.

[45]Ibid., p.29.

[46]Gilmore, *Rogue River Valley*, p.52.

[47]Francis, *History*, p.59.

[48]Gilmore, *Rogue River Valley*, p.54.

where Haines and Smith report that the earliest technologies were unable to access one of the regions most productive locations of gold. That area

> had to wait for a more extensive operation than the rough mining techniques of the period for its exploitation. The fabulous Chinese, Gin Lin, was to take his thousands out of here with a hydraulic later on. It would not yield its riches to the loan [sic] prospector.[49]

The miners knew, of course, that gold doesn't grow on trees. Ground cover, brush, trees represented obstacles to the roving eye, the probing fingers, the clanging pick and shovel. The quickest way to get rid of these obstacles, was to burn them. So the miners often set fires to the grasslands and forests of the study area during the first, frenzied years of the gold rush.

By 1855, sluices criss-crossed the upper Illinois Valley in every direction. Ditches brought water from the Little Applegate to the digs near the mouth of Sterling Creek. Rockers lined the creeks of Jackass and Sterling Creeks. Stream banks were stripped of their vegetation and their top soil, new contours were carved, aggregates were newly sorted yielding boulder piles of varying grades. Charred tree stumps and ground vegetation blackened large portions of the landscape. Pits pockmarked alluvial pastures where in the relative silence of ten thousand years, deer and elk had grazed and native peoples had lived their lives to a radically different rhythm.

Walling -- a first-hand observer -- summarized it this way:

> The lordly pines and oaks were stricken down; the hills and gulches seamed and scarred by the miner's pick . . . and the oppressive silence of nature changed, in a few months, to a scene of restless activity.[50]

The legacy of all this restless activity in the earliest, low-technology years of mining is not easy to assess. Certainly stream banks and alluvial flats were heavily pillaged, even though now to the untrained eye they seem relatively unexceptional, mostly hidden by vegetation or grown back into grassy pastureland. Fire-ravaged hillsides have been replaced by brushfields and forests, whose history we will have opportunity to visit later in this text. Ditches still vein the slopes throughout the study area. The stories told by miners cabins—boughs cut for sleeping pads, trees hacked to build cabins and furniture, rocks and mud turned into fireplaces, firewood burned to ashes—are probably not distinguishable from naturally occurring events and perhaps only marginally more disruptive, though perhaps more concentrated in time, than the activities of the native American population.

LaLande reports that the small scale placer mining of the early era "definitely would have increased sediment in the Little Applegate River during both the chinook and coho runs of fall, with the amount of sediment possibly increased above normal levels during these species' juvenile winter residence in the river system" as well.[51] It can be assumed that this pattern would have been replicated across the study area where similar mining activity occurred. On the other hand, it is possible that the summer resident steelhead fingerlings escaped the effects of increased stream sedimentation, due to the concentration of early mining activity in the water-logged winter months.

Not wishing to overstate the impacts of early mining, LaLande suggests that the turbidity and sedimentation of pick and shovel miners "may not have been significant when compared to that originating from natural winter causes (e.g., the floods of 1852 and the 1860s)."[52] While this may be true across the study area generally during the early era, it may minimize the impacts of the concentrations of heavy activity in time and space. Particularly hard-worked areas may well have contributed to increases of turbidity, sedimentation and bed alteration that exceeded the effects of

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[49]Haines and Smith, *Gold*, p.8.

[50]Walling, *History*, p.359.

[51]LaLande, *Little Applegate*, p.43.

[52]Ibid, p.43.

naturally occurring events, with a resultant negative impact upon not only anadromous fish populations but the riparian ecosystem as a whole.

A case in point is Althouse Creek, where ten miles of claims and a shifting population of up to a thousand miners during the 1850s would have drastically impacted the riparian ecosystem. Other evidence that early technology practiced on an intensive scale could produce severe impacts upon anadromous populations comes from the Klamath River to the south of the study area. There, natives and miners clashed over the impact of mining upon fish populations. Indian commissioner McKee was called in to moderate the situation in the fall of 1851, and found that "the impact of the miners in the region was disastrously evident. [He] found that the Indians were starving, for the tons of mining debris had muddied the creeks and rivers and had made fishing impossible."[53]

Mining was the major humanly-driven agent of change in the ecosystems of the Applegate and Illinois Valleys during the shockwave of the earliest era of Euro-American settlement. Without a doubt, mining was a "disturbance."

Disturbance

A disturbance is "any relatively discrete event in time that disrupts ecosystem, community, or population structure and changes resources, substrate availability, or the physical environment." Researchers began studying disturbances in order to shift the emphasis in ecological study away from the model based on the "successional development of equilibrium communities."[54] They were looking for a less static model, one which took into account the continuing processes of change in natural communities, one based less on the notion of an "end state" toward which all processes aimed. They wished to explore the question: "How does the dynamic setting [emphasis added] of populations influence their evolution?"

Disturbance carries a negative charge in many of its connotations. We are not generally happy when we are "emotionally" or "mentally disturbed." Unwanted consequences flowed if we "disturbed" our father when he was at rest. For ecologists, disturbance is not unnatural or unwished for. Indeed, sometimes disturbance plays a positive role in increasing species' fitness. "The most obvious role that disturbance plays in ecosystems is in the deflection of a community from some otherwise predictable successional path."[55] Under natural conditions, fire as a disturbance does this regularly. To talk of disturbance is thus a way to talk, simply, of change.

Disturbance can be both endogenous and exogenous. To say disturbance is endogenous is to recognize that life, death, and growth are part of biological systems. To say it is exogenous is to recognize that sometimes impacts upon natural communities come from that which is perceived to be "outside" the system in question. Very often, we think of human involvement in ecosystems as taking the form of exogenous disturbance.

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[53]Beckham, *Requiem*, p.69.

[54]S. T. A. White and P. S. Pickett, *The Ecology of Natural Disturbance and Patch Dynamics* (San Diego: Academic Press, 1985), p.7.

[55]Ibid., p.373.

In order to better understand the processes of disturbance events, White and Pickett have created a list of disturbance "descriptors."[56] These include, in part:

Descriptor	Definition
distribution	the spatial features of disturbance
frequency	disturbance per time period
return interval	time between disturbance events
severity	impact
synergism	cumulative effect of disturbances

We can utilize these characteristics to describe the nature of mining as a disturbance across the study area during this era. In terms of distribution, the extent of coverage was impressive. Records indicate miners scoured (although they didn't always score) in nearly every sub-drainage of the study area in their pursuit for gold. Within these sub-drainages, their search was more closely focused upon riparian zones and those higher elevation, non-riparian areas which proved promising as repositories of quartz ore.

Regarding frequency, it can be noted that this was a unique event in the environmental history of the area to date. The return interval, however, for areas particularly rich in gold deposits, became extremely short almost immediately, as wave after wave of newcomers rummaged similar areas and wave after wave of new technologies encouraged yet one more attempt.

The severity of impact varied. In some areas, such as the Althouse region, the East Fork Illinois River around Waldo, the lower Little Applegate and Forest Creek, the severity of the disturbance was particularly noteworthy. In these areas, the stream beds were virtually turned upon themselves. Not only did this have a devastating effect upon instream flora and fauna, but riparian community members above the normal waterline were affected as well. This is particularly noticeable in the removal of deciduous and coniferous trees obstructing the processes of mining.

The timing of the mining season also played a major role in terms of its severity. As noted above, LaLande has pointed out the seasonal effect of severity; the effect upon anadromous species was more pronounced in fall, when lower water levels and stream turbidity created an environment detrimental to the fall runs of chinook and coho salmon. The winter residence of these species was also impacted.[57] Though the impact of mining upon fish may have been seasonal in its impact, the effects of channelization extended beyond seasonal impact. As streams were channelized their ability to hold water was decreased, with an overall loss of moisture in riparian and marsh communities and a resultant loss of moisture reliant plant species.

It was the synergistic effect of mining which perhaps induced the most notable alteration to wetlands across the study area. Mining followed shortly upon beaver eradication and was coincident with an explosion of settlement. Taken together, these activities produced a new look in wetlands. Marsh areas were among the most intensely disturbed. Previously these areas were likely found not only at various locations along the Illinois and Applegate Rivers, but at lower elevations where other drainages joined these, for instance, the Little Applegate River, Thompson Creek and Deer Creek. If beaver eradication began the process of channelization, mining and settlement greatly increased the pace, perhaps even obliterating sign of beaver removal itself.

Also casualties of the riparian areas during this time were the big pines scattered amongst the oak savannah and woodlands. Closest to human activity, these provided much of the lumber for sluices, fences, homes, stores and barns. The oaks—barriers to agriculture and pasture—were also targeted for removal. Indigenous grasses became victims of introduced farming techniques. One historian writes that, in 1853,

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[56] Ibid., p.7. This is an adapted summary of Table 1.
[57] LaLande, *Little Applegate*, p.43.

> as the spring days warmed the land, the farmers began to clear brush, cut the oaks, and plow the meadows . . . They destroyed the sources of grass seeds, acorns and camas for the Indians, and the mining population depleted the deer and the elk.[58]

A major hindrance to noting more precise change within the environment during this era is the lack of environmental documentation available. Most miners were not curious, sensitive, or erudite transcribers of the events of their lives, much less of the land that lay under their feet. The few diary keepers who left us their observations tended to be environmentally general and existentially personal, if not trivial, in their record keeping. Another way to say this is: early settlers were not interested in the same things as are late twentieth century environmental historians.

Here to Stay: the First "Settlers"

The first year of permanent non-native settlement in southern Oregon brought its largest influx of settlers from the gold fields in California to the south or the fertile Willamette valley to the north. The following year saw heavy traffic from the East. The Applegate Trail spilled its weary travelers down off the Greensprings plateau and into the mines and farms of the Rogue Valley. These were people not traveling through, bound for the Willamette, but coming to stay in southern Oregon, "where they set about making their homes."[59] In 1853, some "159 wagons, 400 men, 120 women, 170 children, 2,600 loose cattle, 1,300 sheep, 140 loose horses and 40 mules" descended along Emigrant Creek.[60] This in-migration presaged a tide which has yet to subside. So significant was the early influx that by the fall of 1855 Jackson County (which included Josephine County until 1856) "had attained the foremost place in the list of Oregon's counties, being the most populous and wealthy of all."[61]

Were these people farmers, or were they miners? Probably, most of them were both. In the years following 1852, it would have taken a remarkably distracted traveler to southern Oregon to be ignorant of the fact that the gold fields lay at the end of the trail. And it would have been a remarkably stubborn farm family that could have kept itself from looking down, or stooping down, as they walked the streambanks of their newly-acquired property. It's reasonable to think that the majority of those who came to southern Oregon in the 'fifties had spent at least a few of their earlier days tilling the soil in New York or Tennessee or Illinois or Missouri. But now that a new region presented new options, during the slower months of the year, while waiting for the soil to warm and dry itself enough to accept the next season's seeds, most early farmers spent some time moiling for gold.

Haines and Smith, in their history of Sterlingville, tell us that the distinctions between miners and farmers were not entirely muddied. Perhaps on either end of the spectrum types could be found who embodied the migratory restlessness of the miner and the more steady, sedentary temper of the farmer. The miners and the farmers, say Haines and Smith, "did not mix in perfect amity. Each looked down upon the other...." However, even these extreme types needed each other, and it was perhaps more than a truism that the farmer filled the miner's belly. What kept hostilities to a minimum, according to Haines and Smith, was the development of a standard frontier type, "the farmer-miners, who tried to make the best of each world. It did make for a stability of life frequently lacking in the other placer mining districts."[62]

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[58]Beckham, *Requiem*, pp.81-2.

[59]Walling, *History*, p.339.

[60]"The Applegate Trail", *Klamath Echoes*, n.9, Klamamth County Historical Society, p.14.

[61]Walling, *History*, p.342.

[62]Haines and Smith, *Gold*, p.5.

Samuel Phillips represents this southern Oregon breed, the farmer-miner. John and Marguerite Black offer this vignette

> Samuel Phillips was the earliest known permanent settler in Buncom [at the confluence of Sterling Creek with the Little Applegate]. He came to Oregon and Jackson County in 1853. He was a miner, but he soon turned to farming. With the help of Chinese labor, he built two mining ditches to bring water from the Little Applegate River to his mining claims and farm fields.[63]

The farmer-miner relied on agriculture for a basic livelihood, but turned to mining for a means to join the cash economy. So in some ways, mining's greatest handicap—its reliance on the watery winter months and its cessation during most summer seasons—was the community's greatest boon: it induced miners to settle somewhere and grow some food. In the words of Haines and Smith, "it was an ideal situation for developing a stable and relatively prosperous community."[64]

The earliest stability was felt in Jacksonville and in the valley floor along Bear Creek, where permanent white settlement focused from the start. Out in these agricultural flats, most of the land was claimed by the end of 1852 "by people from the Willamette."[65] Welborn Beeson observed in 1854 that the valley was "nearly all fenced up."[66] The first settlers were nearly all from the north, and they brought with them at least a modicum of agricultural experience in the Willamette Valley. This may not have protected them from a few surprises, given southern Oregon's hotter and drier climate than the one they had left in the Willamette. But the quick learners among them were well positioned to capitalize on the agricultural needs of a burgeoning mining population.

Prior to 1853, foodstuffs came into the Illinois and Applegate mining regions from Crescent City or the Willamette Valley. After the 1852-1853 winter, local farmers were able to support the region. The introduction of livestock in the summer of 1853 supplied a key component in the local diet.[67] Harvesting machines were brought into the valley by 1856, although mechanical breakdowns meant major delays while replacement parts were brought in from San Francisco. B.B. Griffin achieved local notoriety by raising a crop of oats that measured 8'3" in height.[68]

Already by 1854, the flow of food had reversed its direction. Farmers from the Rogue Valley were shipping the food surpluses to Yreka and Crescent City in California.[69] When Sterlingville's fortunes became widely known in that year, according to Haines and Smith, "the farms of the Rogue Valley were producing plentifully . . . and the miners were able to buy plenty of fresh food . . . from the farmers who packed it in across the hills. Flouring mills were in operation, too. The mill at Ashland was able to supply a large quantity of that valuable commodity ground from locally raised wheat."[70] In 1855, gold's price was at its peak, the mines were producing up to a million dollars worth of it annually, and "much of [it] was retained in the valley in payment for local foodstuffs and supplies."[71]

Walling summarizes:

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[63]John and Marguerite Black, *Ruch and the Upper Applegate Valley*, p.93.

[64]Walling, *History*, p.339.

[65]Ibid., p.339.

[66]Wallace D. Farnham, "The Development of an Oregon County, 1852-1890: Mines, Farms and Railroad," *Pacific Historical Review*, v. xxv, 1956, University of California Press, p. 32.

[67]Willis B. Merriam, "Notes on Historical Geography of Rogue River Valley," *Oregon Historical Quarterly*, (March-December, 1941), p.320.

[68]Gilmore, *Rogue River Valley*, p.317.

[69]Ibid., p.313.

[70]Haines and Smith, *Gold*, p.24.

[71]Merriam, "Notes," p.320.

> Within the space of one year, this rich and fertile country had become populated and advanced far upon the highway of rapid and thorough development.[72]

As the explosive rapidity of placer explorations into the nooks and crannies of the Rogue Valley was matched by the rapidity of settlement on its agricultural lands, and the Bear Valley filled, agricultural settlers, as the miners only months before them, were forced over the divide into the Applegate region. In the space of only a couple years, most of the fertile bottomland of the Applegate Valley, and much in the Illinois Valley, was claimed and a thriving farm community was already well-established.

Donation Land Claim Act

The earliest land-owners in the Applegate and Illinois Valleys, as opposed to the filers of mining claims, took up their acreage primarily under the terms of the Donation Land Claim Act (DLCA) of 1850. According to one of the chroniclers of Josephine County, "the gold rush of 1849 almost depopulated Oregon. Emigration nearly ceased."[73] The DLCA sought to remedy the sudden disinterest in settling the new Oregon Territory by offering land on affordable terms to folks willing to stay put for a few years and work the land.

Under the terms of the DLCA, which went into effect on December 1, 1850, a male settler could claim 320 acres (a half section) of land and eventually assume ownership, if he resided on and cultivated the land for four consecutive years. If married before December 1, 1851, his wife could also claim 320 acres, and own it in her own name.[74] A single woman, however, could not file a claim on her own.

Under the impact of public pressures working at cross-purposes to each other, Congress later amended the DLCA. It raised the minimum age for filing claims from 18 to 21, reduced claim size per person to 160 acres, reduced occupancy requirements to two years, and established a fee of $1.25 for each acre claimed. It also allowed claimants to sell their claims prior to receiving patents. Mineral lands were excluded from the DLC Act. During its time of implementation, some 7,317 DLC certificates were issued on 2,563,757 acres of Oregon land, for an average of about 350 acres per claim.[75]

The DLCA was not the only mechanism available for turning what the federal government considered "public domain" into private property. Some settlers purchased public land under an Act of 1820, and in another decade, the Homestead Act of 1862 would come along to vastly extend the possibilities for settlement on the land. But the families who would become the backbone of life in the Applegate and Illinois Valleys staked their claims to the prime agricultural properties under the aegis of the DLCA. By the time it expired on December 1, 1855, according to John and Marguerite Black, "most of the best land in the Bear Creek and Applegate Valleys had been located and claimed."[76]

Along with this act, of course, came the imperative of giving shape to the acreages of public domain as they were parceled among the first-comers to the region. The standard shapes were predetermined by the language of the Act, which called for packaging acreages in multiples of one hundred sixty and three hundred twenty, for compatibility with the mathematical and geometrical

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[72]Walling, *History*, p.339.

[73]Hill, *Josephine*, p.86.

[74]Black and Black, *Ruch*, p.15.

[75]Thomas Donaldson, *The Public Domain: Its History with Statistics* (Washington: Government Printing Office, 1884), p. 296.

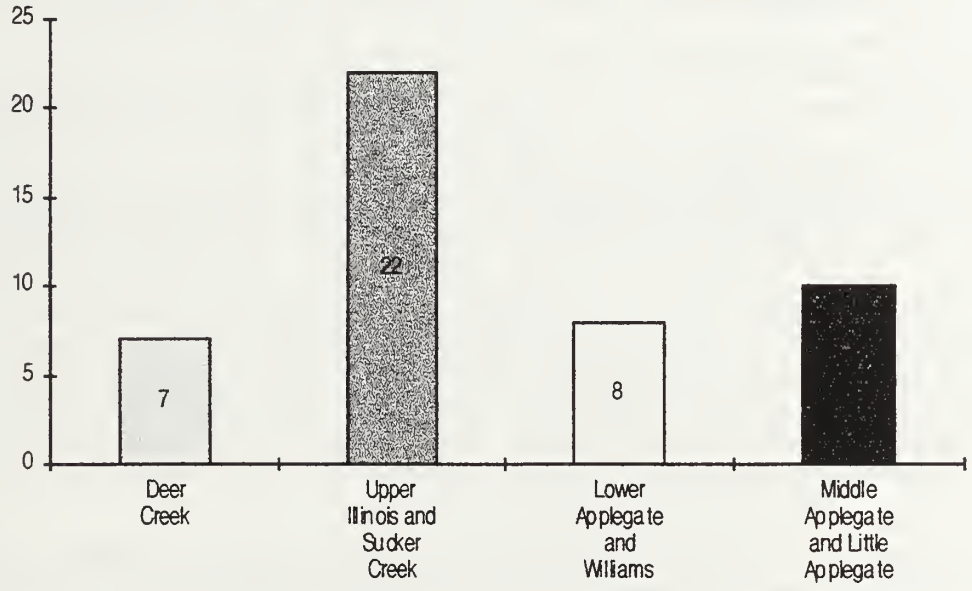
[76]Black and Black, *Ruch*, p.15.

precision of the cadastral survey system. The DLCA called for "establishing the township-range, thirty-six-section cadastral survey system. . . and making sure that new claims adhered to it."[77] It directed that a surveyor-general be appointed whose tasks would include "administering the DLCA, settling land disputes" and carving the land up into the proper packages.

The result, on the landscape, of all this precision is that claims followed a standard surveying system taking its cues from compass point orientations rather than from natural landscape features. Straight lines cut across open areas and over hills, irrespective of natural boundaries such as streams, rivers, slopes, and meadows, producing the patchwork landscape now so familiar.

Who Were These Folks?

We have records of these first Donation Land Claims (DLCs). Forty-seven, in all, were filed in sub-basins of the study area. The below chart shows the number of original DLCs by sub-basin:



Seven claims were clustered on Deer Creek: Joseph H. Dickerson, William Guest, William T. Kelly, William McMullen (McMullin Creek), Samuel Mooney (Mooney Mountain), Edward I. Northcutt, Henry Wixom.

Twenty-two DLCs were scattered along the Upper Illinois and Sucker Creek, near present-day Kerby, above present-day Cave Junction, in and around present day O'Brien, Takilma, and Bridgeview.[78] They included: Charles Beach, George E. Briggs (Fort Briggs), Pulaski Hall, Sam[illegible] Hicks, James Kerby (Kerby), James Lowery, Jacob Mendenhall (Mendenhall Creek), William Newman, Norman Patterson, Abraham Platter, John D. Post, John Reeves (Reeves Creek), L.E. Reeves (Reeves Creek), W.W. Ross, Samuel R. Scott, Comfort Sibley, William Sutherland, Ezra S. Tanner, John Thomas, Alonzo P. Turner, William H. Watkins, Samuel White.

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[77]P. G. Boag, *Environment and Experience: Settlement Culture in Nineteenth-Century Oregon* (Berkeley: University of California Press, 1992), p.116.

[78]Note: This list includes DLCs beyond the boundaries of study area but significant for analysis.

In the Lower Applegate and Williams Creek sub-basins, eight DLCs were clustered along lower Williams Creek, on nearby Missouri Flat, and at the mouth of Murphy Creek. They included James Barnes, John P. Davidson (Davidson), Isaac Luellen, Bernard Murphy (Murphy, Murphy Creek, Murphy Mountain), William Shoudy, James Kent, John Powell (Powell Creek), William Pennington (Pennington Creek, Pennington Mountain).

In the Middle Applegate and Little Applegate portions of the study area, ten DLCs were filed. Seven were clustered in the broad valley around the confluence of Forest Creek and the Applegate River: John O'Brien (O'Brien Spring), James Bishop (Bishop Creek), Henry H. Brown, George Long (Long Gulch), Xavier LaClair, Willard Spencer (Spencer Gulch), and Jacob Toffelmier. Two were in the Little Applegate drainage: Gideon B. Davidson and Daniel Hopkins (Hopkins Gulch). And one was at the mouth of Thompson Creek: the William Thompson heirs.

Historians John and Marguerite Black have made a substantial contribution to this and every future historical study of the Applegate country. They offer brief accounts of the history of the DLCs in the stretch of the river from the mouth of Thompson Creek to the confluence with the Little Applegate River. A couple of examples drawn from their work will flavor our imagination for the lives of this new wave of land managers that swooped into the Applegate region in the 1850s.

John O'Brien came from Ireland to Oregon in 1852 at the age of 26. A year later, he filed on a Donation Land Claim along the Applegate River above the mouth of Thompson Creek. His story classifies him as a farmer-miner.

> The mining boom in Jacksonville and surrounding mountains was just getting underway. John joined the miners on the Upper Applegate and took up claims in the Steamboat area [probably around 1860]. Even though he lost a major suit and his claims to the rival Fowler mining company, he saved enough money to start improvements on his Donation Land Claim which was on both sides of the river. He married Sarah Barkdull of Williams Creek on March 9, 1862. He built a two-story frame house, barns and other buildings on the north side of the road. His U.S. citizenship was granted on February 7, 1865. An orchard was set out. Then he built a dryer for fruit. He raised hogs in large numbers, selling hams and bacon to the miners.... In 1899, John O'Brien lost his life trying to cross the river on horseback carrying a sack of grain in front of him. The horse lost its footing and went down. It was several days before they found John's body.[79]

George Long arrived in Jackson County in 1853, and took up a Donation Land Claim in the Applegate Valley. "He cleared and developed the acreage into productive farm fields. Other owners further improved it by obtaining water rights and constructing irrigation ditches from Applegate Creek."[80]

William Thompson took up his DLC in 1853 at the mouths of Thompson and Humbug Creeks on the Applegate River:

> He held 320 acres and included the land on which the store, school and church were later established, as well as rich farm land on both sides of the river. Thompson died August 8, 1856, and was buried in Jacksonville Cemetery.... The land was sold and divided among early settlers.[81]

The DLCs of the Applegate and Illinois Valleys formed the solid backbone of their emerging agricultural communities. Even though the record shows that some of them changed hands relatively often, beginning after only a year or two of settlement, they were steadily occupied by families that worked hard at making a life for themselves. Kerby's first irrigation ditches date from

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[79]Black and Black, *Ruch*, p.166.

[80]Ibid., p.167.

[81]Ibid., p.153.

1855, indicating a settled farm community in that portion of the Illinois Valley.[82] In the space of two or three years, this new wave of land managers, schooled in the fine points of both subsistence and commercial agriculture by lessons learned in the Midwest and the East, as well as Europe and the British Isles, had re-shaped much of the landscape of the rich alluvial flats in the study area by their addition of buildings, fences, crops, cattle, orchards, bridges, ditches, and roads.

These earliest years—say, the mid-1850s till 1860 -- were regarded by Walling as "the period of greatest prosperity" in the Illinois Valley. We can envision a booming mining community, plentifully supplied with food from approximately twenty farms within five miles of Althouse. Vegetable crops were healthy, and the valley was sprinkled with five saw and grist mills, the same number of "school houses", saloons, tanners, blacksmith services, hotels, pack and stage service, stores, and, in "Kirbyville," billiards.[83]

But like any community, it was not without its scars.

New Managers Displace the Old: The Rogue Indian Wars

The ethnography, cultural practice, history and environmental impact of the native inhabitants of the study area are beyond the scope of this report. Native history is commonly considered pre-history, while we are interested here in the historic era. However, at certain points, prehistory is inseparably bound to the historic. The landscape upon which the historic era was inaugurated, for example, was shaped by native American fire regimes. And the assumption of the power to re-shape the land, represented by the new wave of miners and farmers, was not uncontested by those they were replacing.

This intersection of the prehistoric and the historic eras is, in effect, a clash of cultures. One culture was resident on the land for perhaps ten thousand years. Among the new cultures, the dominant one was nearing the end of a three-hundred-year march across the continent. At earlier points of this clash, the outcome of the encounter was in question, the solution to the problem seemed open. By the time American settlement reached southwest Oregon, however, a consensus had emerged as to the final solution of the Indian problem. Whether by removal or death—or, as was usually the case, by a combination of these—the native peoples needed to go.

A paragraph from Black and Black reminds us that the waves of human immigration and explosions of mining and agricultural activity on a landscape now named southern Oregon overlaid a management system, not to mention a way of life, already in place.

> Before any settlers arrived in the Upper Applegate Valley, Indians had a summer encampment at the confluence of Little Applegate River and Big Applegate River. They had huge drying racks for fish where it was easy to catch and prepare the fish for the winter food supply. The first explorers through the area reported finding this encampment and the drying racks. Indians lived well in the valley with its abundance of acorns from the oak trees and numerous edible plants. They left with reluctance.[84]

The early records reflect the toll that the reluctance of the natives took on the miners and farmers of our study area. A surprising number of those who filed on or inhabited the DLCs between 1852 and 1855 met their end at the hands of the natives. Jerome Dyer (after whom Jerome Prairie was named, in the lower Applegate) was one of these, meeting his end at the hands of six Indians while

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[82]Erickson, *Population Geography...*, p.55.

[83]Walling, *History*, pp. 449-454.

[84]Black and Black, *Ruch*, p.114.

traveling home from Crescent City.[85] Another was James Bishop, whose DLC was near Logtown. He and his wife Anna and their ten children took up their claim in 1853; he was killed by Indians in an uprising of 1855.[86] A DLC settler from Central Point, Martin Angel, known for "dealing harshly with Indians," left his grain fields in 1855 to help the U.S. Army evict a small band of Applegate Indians from a deserted mining cabin in Star Gulch. He was ambushed and killed on the main road from Jacksonville through the Applegate Valley.[87] Deer Creek settlers were particularly effected. Philpot, one of the earliest settlers, was killed while sitting astride his horse, "which was drinking from Deer Creek."[88] William Guest, DLC claimant and head of the first family to settle in Deer Creek, was killed while "plowing in his field."[89]

The records generally do not make a big deal of these events. They reflect a curious matter-of-factness about the stormy, often bloody, process of one people replacing another. Most of them enjoy the vantage, or disadvantage, of hindsight, so they tend to assume that hostilities with the native peoples were admittedly a sometimes tragic, but more often just an annoying, part of what everyone can see was a fore-ordained process. Contributing to this impression, perhaps, is the fact that life in this new land was precarious in a whole host of ways. Reading the local histories of the Applegate and Illinois Valleys, one cannot help but notice the tragedies that seem to punctuate almost every family history. Men drowning, families burning with their buildings, children killed under a horse's foot, women dying in childbirth, infants dying of disease, it seems, before the age of one or two. Death seems to have been a more visible part of life than it is today. Perhaps in that context, an occasional violent death at the hands of the native people was not too surprising, or too high a price to pay for the consolidation in one's hands of power over the land.

But if one listens to the occasional story coming down from those times, the tenor of life resolves for a moment. Here are two examples.

> One of the permanent Indian camps, known locally as rancherias, was located at the mouth of Sterling Creek. Like most of the camps, it was a small one though it had been large enough to discourage prospecting until Jim Sterling made his strike.
>
> In early 1855, a miner named Sickman had gone out deer hunting. Like present day followers of the sport, he had a tendency to shoot at sound rather than at sight of an animal. On this occasion he killed an Indian woman from the rancheria at the mouth of the creek. The Indians were highly incensed by the proceeding and appeared at the cabin of Sicken and his partners demanding blood money, in this case Stickman's horse. Sicken refused to comply.
>
> The persistence of the Indians led the men to move up the creek to the outskirts of the town. The Indians followed them and, one evening, five warriors appeared and demanded compensation now. Stickman's friends stalled the Indians while that mighty hunter got his horse and fled over the hill to Phoenix and thence into Yreka. Some few presents were given to the Indians but the incident added fuel to the steadily worsening relations between the whites and the Indians throughout the Rogue Indians' country.[90]

The second example occurs in the Illinois Valley. In 1855, a packer named Hudson was discovered with a rifle ball in his head and seven or eight arrows in his body. "One of the mules was found lying dead, and not far off were scattered the contents of sundry packages of merchandise, together with the old rags which the murderers had exchanged for better clothing

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[85]Johnson, *Applegate*, p.16.

[86]Black and Black, *Ruch*, p.41.

[87]Ibid., pp.17-19.

[88] Walling, *History*, p.452.

[89] Ibid., p.452.

[90]Haines and Smith, *Gold*, p.25.

amongst the packs." Fifteen volunteers set out to bring the killers to justice. The Crescent City *Herald* commented:

> It is hardly necessary to add that the country is represented to be in a general commotion, and that volunteers are called from every section to assist in the extermination of the Indians. As a consequence of this, business and trade is very dull, nor can we look for any material improvement until the Indians are entirely subdued, and the lives and property of the people secured against the ever recurring depredations of these savages.

Another account measures the effect of this murder on the newcomers to the Illinois Valley:

> The man that kept the house at the foot of the Siskiyou has deserted it and is now here at this place. Several trains bound for Indian creek are lying here, afraid to venture on the road which is said to be covered with Indian tracks. Large forts are built and building at Althouse and through the Valley. The want of arms makes apprehension doubly painful. The arms have been sent away with the companies who range through the mountains.

This same account conveys the state of the spirit in the region during these events: "The news is startling and fills all with fear."[91]

This heightened level of fear lies behind the celebrations of Indian annihilation that mark the period. At a party attended by over a hundred persons, held at Table Rock on Sunday, July 25, 1852, in honor of a murderous Indian campaign in the Rogue Valley, a toast was offered, and presumably welcomed, by J.W. Davenport:

> In behalf of those who contributed to this dinner—May your generous acts on this occasion, be honored throughout this Valley; may its emblematic influence excite the independence of our Union, and may you live to see the time when the Indians of Rogue River are extinct.[92]

This toast brought together in a single vision the newly claimed lands of southwest Oregon, the "manifest destiny" of the white race to rule the continent, and the extinction of the natives. The sentiment seems to have carried the day in the region. At the time, Indian agent Skinner reported that between the Cascades and the Coast Range, and from the Umpqua to the Siskiyous, there resided a native population of "406 men, 443 women, 159 boys, and 146 girls, or at total of 1,154".[93] By the time of the interim Treaty of 1853, the upper Rogue population was reported at 547.[94] Which means, within two years of the discovery of gold on Jackson Creek, the native peoples were outnumbered.

Shortly after the party at Table Rock, the renowned Indian fighter Ben Wright paraded through the streets of Yreka with scalps and mementoes. These were taken from the human beings living in a peaceful Modoc village as they prepared for winter. Yreka town celebrated with a seven-day binge.[95]

> They lifted them from their horses and bore them to the saloons, where the best was none too good . . . . For a week, high carnival reigned.[96]

These events are often included in the retelling of the Rogue River Indian Wars, the name assigned the loosely connected and wide-ranging hostilities of the 1852-1856 era. These hostilities find their place in our narrative as a kind of struggle for succession. A new land management regime was

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[91]Street and Street, *Sailors' Diggings*, pp.20-21. Quotes from the *Crescent City Herald.*

[92]Oregon *Statesman*, August 14, 1852, quoted in Beckham, *Requiem*, p.79.

[93]Beckham, *Requiem*, p.80.

[94]Walling, *History*, p.207.

[95]Keith Murray, *The Modocs and Their War*, p.27.

[96]Walling, *History*, p.207.

making its bid to succeed the old. The old regime understood that to lose the power to implement its own understanding of land management was to lose its way of life, even to lose life itself. The new regime understood that its own understanding of land management would not be consolidated until the ground was swept clean of its predecessors.

Americans at the time were quite conscious of the "necessity" of Indian removal. In an early history of Oregon and Washington, published in Chicago in 1856 before the removal of the remaining Rogue River natives to the Grande Ronde and Siletz Reservations that same year, southwest Oregon was characterized as falling behind schedule in the development of its mining activity.

> Owing to the number of hostile Indians prowling continually about the region, it has never been satisfactorily, "prospected", [because of] the fact that very few persons were willing to risk their scalps, even in the search for gold.[97]

The author's brother had ventured to risk his scalp in the region however, and had been killed in "the great battle" at Table Rock in 1853.[98]

That the conflict with the natives held up progress in the region was echoed by Walling. He was sorry the Rogue Valley didn't sooner experience the good fortune of the Willamette, which was "devoid of disaffected aborigines."[99] He regretted that the lull in hostilities, holding since 1851, was punctured by the skirmishes of 1853. During 1853, "mining operations" and "general improvements", particularly within the study area, came to a virtual standstill. Donation Land Claims were abandoned, and isolated farmhouses became fortified and recognized by such names as Fort Briggs and Fort Hays. However, progress "revived immediately upon the conclusion of peace, and quickly assumed a more permanent character than at any previous time." A similar dampening of activity in the region occurs in late 1855 and 1856, during hostilities leading up to the removal of the natives. Again, in the face of only minor loss of life, mining operations ceased, fields were left untended and mobility was impacted. But after the removal of the natives, progress returned with a vengeance, "as if to atone for the season of enforced idleness."[100]

The dynamics at work here were not lost to Walling. He placed the above few seasons of lost progress in a larger context, tying southwest Oregon into a national tale. He felt as if the Rogue Wars were no different than other wars which raged across the western landscape, "where the blood of the early settlers was poured out in vindication of the grand principle of Caucasian progressiveness. For the white and the red races are equally uncomfortable to each other's habits of life, and meet only to repeat the old story of white conquest and native subjugation."[101]

The removal of the natives from southwest Oregon opened the way for the newcomers to consolidate their own plans for the region. For the natives, however, removal was the final blow in their short but devastating encounter with American settlers. A lifestyle intact and in place for millennia was destroyed in the space of decades from first contact. The final peace treaty and removal was only the verification of this reality. As Chief John told it, "It is not your war but your peace which has killed my people."[102]

The Rogue River Indian Wars consolidated a new regime in power and dismantled the old, banishing it to the dispiritedness that accompanies genocide.

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[97]A. A. Armstrong, *Oregon: Comprising a Brief History and Full Description of the Territories of Oregon and Washington* (Chicago: Charles Scott and Company, 1857), p.51.

[98] Ibid., p.51.

[99]Walling, *History*, p.336.

[100]Ibid., pp.341-2.

[101]Ibid., p.178.

[102]O'Donnell, *That Balance*, p.62.

From Territory to Statehood

The defeat and banishment of the Rogue Valley's native Americans, in 1856, settled the matter of whose land this would be for the foreseeable future. It was the local confirmation of events that had begun much earlier: the American contestation of Great Britain's claims to the Pacific Northwest; the organization by Oregon settlers in 1843 of a "provincial government" loyal to the United States of America; the agreement between the United States and Great Britain in 1846 setting the boundary at the 49th parallel; and the establishment by the U. S. Congress, in 1848, of a territorial government in Oregon.

The white settlers of Oregon didn't seem to doubt for a moment that they would succeed in the clash of cultures. The territorial legislature officially designated southern Oregon as Jackson County in early 1852, placing its political grid down over the region as if no other was already in place. In March, 1853, the first Jackson County Board of Commissioners met in Jacksonville, with the discoverer of gold, James Cluggage, among their number. Until 1856, when Josephine County was carved out as a separate entity, Jackson County included the entire study area. Josephine County's first county seat was naturally established at its most populous town, Waldo. From there it was transferred to Althouse, then to a more central location at Kerby, and finally, construction of the railroad drew it to Grants Pass.

In 1859, Oregon became a state among the United States. By then, the study area was being shaped and re-shaped by the incoming management regime. In the seven years of white settlement, the landscape had doubtless changed more than during the previous ten thousand. In the eyes of the incoming managers, it was beginning to look like home.

The Look of the Land

What would we see, if we could look at the landscape of the Applegate and Illinois Valleys in these earliest years of Euro-American settlement? That would depend, of course, on whose eyes we had. And what mind lay behind those eyes, what human experience on the land and with the land, what intentionalities we brought with us for our own lives on the land.

What the Explorers Saw: Mapping Confusion

Peter Skene Ogden and company, as noted above, entered the study area primarily in the pursuit of beaver and in the creation of a "beaver desert." Ogden was also interested in making geographic sense of the previously "unexplored" and unmapped lands of southern Oregon. Toward this end, Ogden became interested in discerning just what river drainage it was that he and his trappers were roaming in the rugged territory of southwest Oregon. Confused by the terrain, Ogden's conclusion was that the present-day Klamath and Rogue Rivers were one large drainage, flowing west to the ocean.

> In short, Ogden surmised that all of the rivers they had seen since leaving the lava beds of northeast California were part of a single, huge drainage, a misconception that would be perpetuated on the Arrowsmith map several years later.[103]

The "Arrowsmith map" LaLande refers to is London cartographer John Arrowsmith's 1834, "Map of the British North America." This map was influential in Pacific Northwest exploration, favored by the Hudson's Bay Company, and its conclusions—in this case rooted in Ogden's notes and drawings—found its way into maps generated by such noteworthies as Washington Hood (1838),

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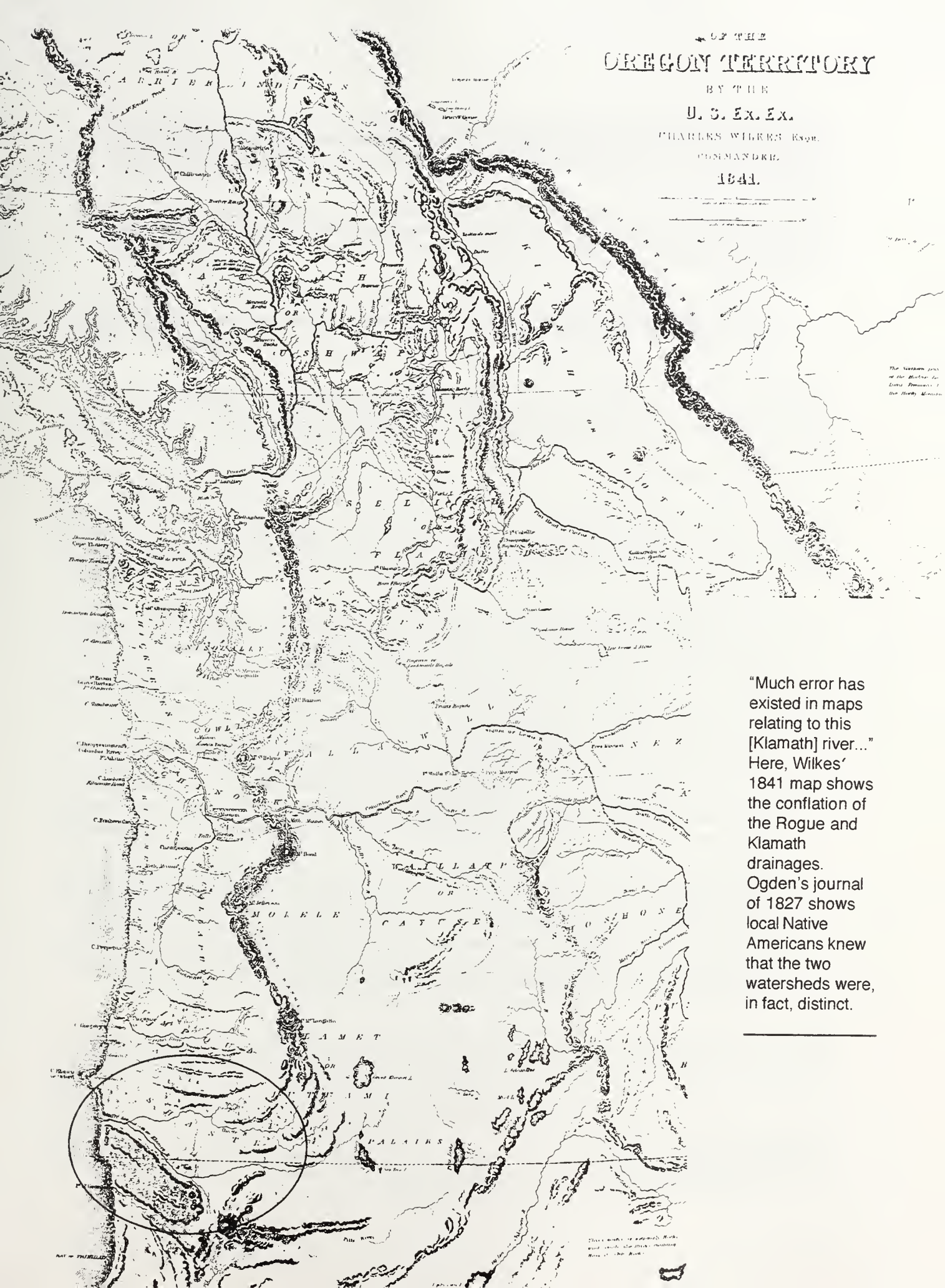
[103] LaLande, *Siskiyous*, p.105.

Samuel Parker (1838), and John C. Fremont (1848).[104] The "Map of the Oregon Territory" generated by the Charles Wilkes' Exploring Expedition of 1838-1842, and incorporating information from the travels of Emmons through the Rogue/Klamath region, also reflects a conflation which renders the whole of the region a single basin.

George Gibbs, in his journal of events recorded while traveling through northwestern California with U.S. Indian Agent Fredrick McKee, recognized the confusion—though not its source—in this journal entry from 1851:

> Much error has existed in maps relating to this [Klamath] river; its mouth having by many (among others, Captain Wilkes and Col. Fremont) been placed in Oregon, about 42° 35', and it was for a long time supposed that Rogue's river, which actually empties about that latitude, was a branch of the Klamath. The distinctiveness of the two streams has since been ascertained, but the source of the mistake is nowhere noticed.[105]

[104] Ibid., p.127; This section also draws from Carl Wheat, *Mapping the Transmississippi West, 1540-1861*, v.2 (San Francisco: The Institute of Historical Cartography, 1958), pp. 99-171.
[105] Ibid., p.128-9.



"Much error has existed in maps relating to this [Klamath] river..." Here, Wilkes' 1841 map shows the conflation of the Rogue and Klamath drainages. Ogden's journal of 1827 shows local Native Americans knew that the two watersheds were, in fact, distinct.

From a contemporary perspective, it is perhaps humorous to find such geographic confusion perpetuated by the foremost maps and explorers of an earlier era. We are inclined to dismiss their conclusions as the flawed products of an earnest, earlier scientific mindset; evidence of the trials and errors inherent in progress.

However, if we shift the frame of inquiry, we see something different. The natives of the region knew the answer to Ogden's question; they knew the corrective to a generation of misdrawn maps. Ogden's journal clearly records their position on the matter. In mid-February of 1827, while camped along Bear Creek, his journal relates that:

> [the Shasta Indians] say the Stream we are now encamped on has no connection with the Clammitte River that it [the Klamath drainage] takes a southern whereas this [the Rogue drainage] takes a Western Course . . . . . if the above information should prove correct as regards the River I shall and I may add all will be pleased.[106]

Pleased perhaps, but somehow unable to "see" clearly enough to incorporate millennia of lived experience into the state-of-the-art regional map of the nineteenth century. It is perhaps a truism to note that what we see is often dependent upon what we allow ourselves to see.

What the Pioneers Saw

Walling reconstructs for us the vision of the pioneer, though the above example cautions us to not forget that Walling's own vision, from a vantage point thirty years later, was influential in his own reconstruction.

> After the straits to which a six-months' land journey across the most desolate part of North America had brought them, how welcome to their vision must have been the sight of the grassy plains, the wooded slopes, and tree-fringed water courses of Southern Oregon. How deep the song of thankfulness that arose from their breasts! Possibly the divine artificer could have created a more beautiful, a more fruitful valley, but doubtless he never did. If we may believe those pioneers, the country was one of primitive wildness, yet of obvious fertility and productiveness. The wild grasses grew in profusion, covering everywhere the land as with a garment of the softest and most luxuriant verdure. The hill sides were concealed beneath this marvelous plant growth which hid nature's ugliest scars from view. The rich soil, as yet unimpaired in fertility, sent up the stalks to the height of a man or of a horse. Wild berries flourished; the beautiful mountain streams, clear as glass and of most refreshing coolness, ran, unpolluted by the dirt from mines. The wild deer and elk, grazed undisturbed in the open meadow, or sought the shade of their leafy coverts and gazed out upon their quiet world. The hill tops, now mainly covered by dense thickets of manzanita, madrone and evergreen brush, were then devoid of bushes and trees because of the Indian habit of burning over the surface in order to remove obstructions to their seed and acorn gathering. In the streams roved the trout, the salmon-trout and the salmon, the favorite sustenance of the Indians. Some scattered villages of natives formed the only fixed population of the beautiful Rogue river valley, which were located near Table Rock, on Ashland creek, Little Butte creek, and at a few other points, where in after years they struggled manfully against the incoming tide of white settlers.[107]

Another "latter-day pioneer" is Ruth Pfefferle, who, from a late-twentieth-century perspective, chronicles the inspiring history of Josephine County. She, too, imagines the vision of the first Euro-Americans in the study area.

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[106] LaLande, *Siskiyous*, p.62-63.

[107] Walling, *History*, p.334.

> When the first miners came to the Illinois Valley they found all of the valley as well as the surrounding hills and mountains covered with thick forest. There were huge pines, sugar pines, Douglas fir, oak and other trees—trees so thick and tall it was almost impossible to see the sky.
>
> It is hard for us to imagine how it was at that time. Seventy-five years later there were still many trees. There was a homestead that could have been taken up sooner, but no one wanted it because they said, 'There are too many trees.' That parcel of land is now part of Cave Junction.[108]

What the Surveyor Saw: Government Land Office and Donation Land Claim Surveys

There were, on the other hand, a few individuals at this time particularly interested in on-the-ground description. These were the surveyors of the Government Land Office. Working from their "Manual of Surveying Instructions", these intrepid men labored to implement the Land Ordinance of 1785. This ordinance was a three-fold endeavor. It established the new principle of "survey before settlement" in order to avoid the potential chaos of a landrush mentality; it established a mathematical, nationally integrated cadastral survey as a way impose conceptual order on confusing geographic variability; and it applied a new, squared-off standard of measure to the land, the section.[109] In the service of these national goals, surveyors doggedly labored across fields and brushlands, forests and rocky bluffs of the study area, establishing township and section lines across the landscape as they went, and writing in their little notebooks what they were seeing.

A key component of these surveys was the "bearing tree." "Thus the place of a township or section boundary POST," read the instructions, "must be evidenced by four 'bearing trees', if to be had, (one in each adjoining township or section, as the case may be), whose course and distance, kind and diameter, all are to be given in the notes."[110] As the survey team proceeded dutifully across the landscape, they marked and recorded the species and size of selected trees. In practice, these trees were within a reasonable distance from the corners being marked, in a healthy condition, and of a common species. In other words, surveyors marked "average" trees—representative species, close to corners, not too big (avoiding mortality), not too small (trees needed to be visible). Such guidelines may be prone to weakness due individual surveyor preference, but there is little reason to believe surveyors did less than their best to apply standards in a consistent and responsible manner. Consequently, the collected data can be assumed to provide a consistent and reliable random sample of species and size information across the landscape during the earliest years of settlement.[111]

Since 1993, Zowada has worked with early Government Land Office (GLO) survey notes as a part of the Buncom Project within the Applegate Adaptive Management Area. The Buncom Project encompasses the Sterling Creek watershed, a 12,000 acre portion of the Little Applegate sub-watershed of this study. In 1853 and 1857, GLO surveyors established section and quarter-section corners across 85% of the project area. In 1917, they covered the remaining 15%. From this information, Zowada has been able to show "the vegetative makeup of the ecosystem at the end of

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[108]Pfefferle, in Francis, *History*, p. 23.

[109]Max Hutchinson, "A Guide to Understanding, Interpreting, and Using the Public Land Survey Field Notes in Illinois," *Natural Areas Journal*, 8 (1988), p.246.

[110]*Instructions to the Surveyor General of Oregon; Being a Manual for Field Operations* (Washington, D.C.: Gideon and Co., 1851), p.v.

[111]Information and sources relating to GLO and DLC surveys are drawn from interviews with Lane Bouman, Deputy State Director for Cadastral Surveys, Eastern States, 1969-1989.

the Indian economic and social spheres of influence and what the new European culture inherited."[112]

The following data are drawn from the 1853, 1857, and 1917 surveys of the Buncom Project Area.

Species	#	range (inches)	avg. diam.	% of total
White oak	44	1-30	12.0	29.3
Yellow pine	35	6-48	20.0	23.3
Douglas-fir	32	8-40	16.0	21.3
Black oak	24	2-24	12.0	16.0
Laurel	8	2-12	5.0	5.3
"Brush"[113]	3	2-4	-	2.0
"Openings"	3	-	-	2.0
Cedar	1	20	20.0	.7
Total	150	1-48	15.5	(99.9)

The area surveyed is a portion of T38S R2W, T39S R2W, and T39S R4W. It rises from 1,700 feet of elevation at the junction of Sterling Creek and the Little Applegate to 5,200 feet atop Anderson Butte. Such species composition as noted above is consistent with an area of southern aspects composed of ponderosa pine/manzanita communities, and northern aspects supporting "an array of forest types blending Douglas-fir, ponderosa pine, madrone, white oak, and black oak into a mosaic of forest communities."[114]

The Donation Land Claim Surveys of 1850 to 1855

During the years they were working to implement the Land Ordinance of 1785, Government Land Office surveyors were drawn into service surveying the Donation Land Claims (DLCs).

> The surveyor general's tasks included administering the DLCA, settling land disputes, and . . . establishing the township-range, thirty-six-section cadastral survey system in the Willamette Valley and making sure that new claims adhered to it.[115]

In the process of their work, the surveyors recorded a brief narrative description of each Donation Land Claim and a catalogue of all trees—by size and species—blazed around the perimeter of the claim.

The DLC lands were spread across 14 Townships. Some two-thirds (31 of 47) were established in only four, T38S,R3W (7); T38S,R7W (7); T39S,R8W (6); T40S,R8W (11). The following map shows the sections containing the original DLCs.

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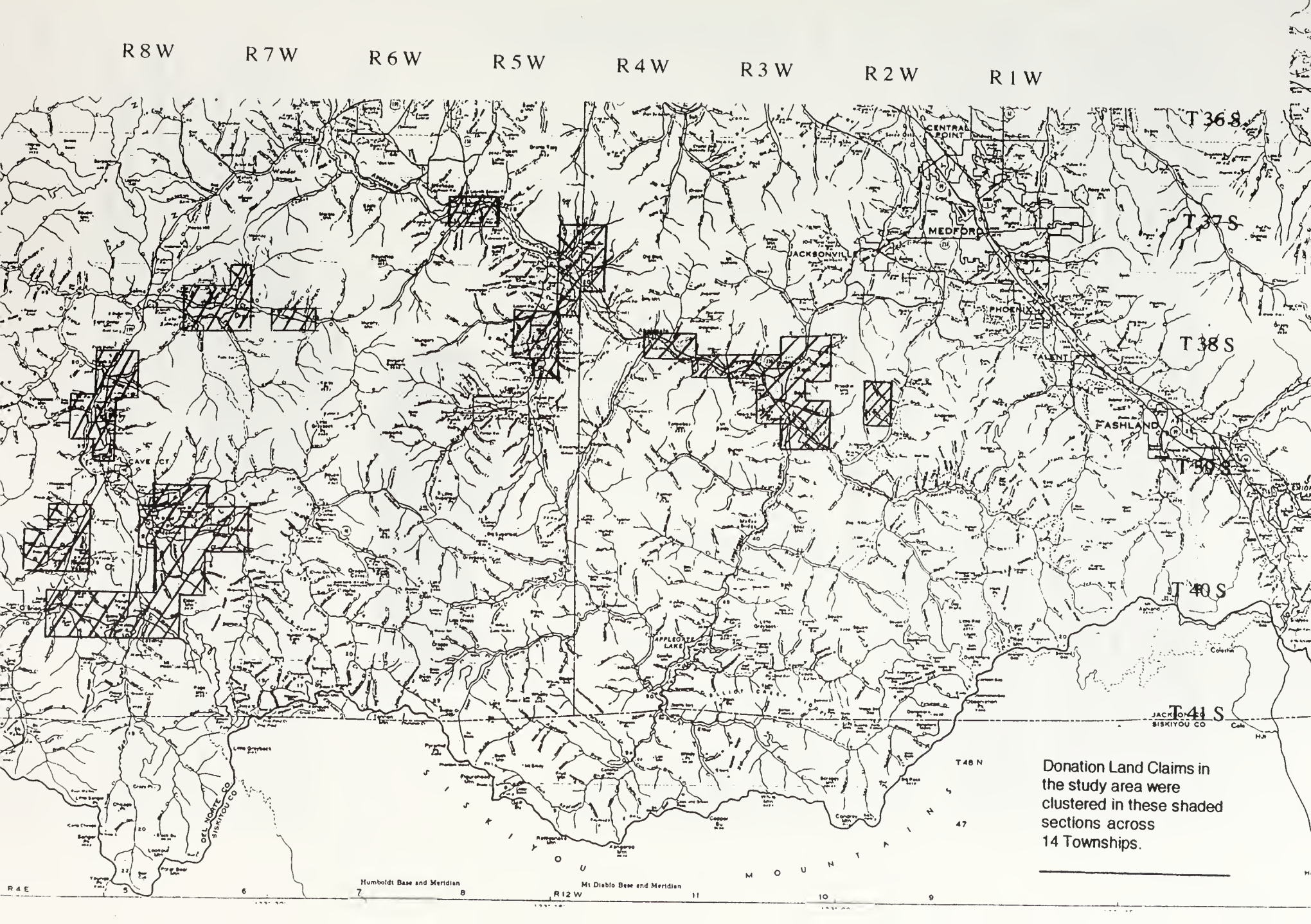
[112]Larry Zowada, "Great Moments in the Buncom Project," September 24, 1993, n.p. Bearing tree information from 1853, 1857 and 1917 Land Survey of Buncom Project Area.

[113]Manzanita, willow and bugwood.

[114]Zowada, "Great Moments", n.p.

[115]Boag, *Environment*, p.116.

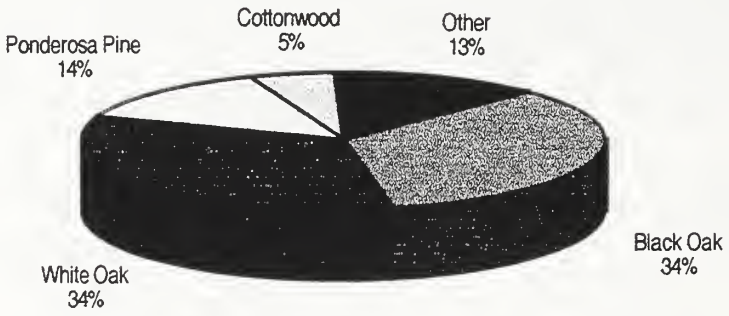

R8W
R7W
R6W
R5W
R4W
R3W
R2W
R1W
T 36 S
T 37 S
T 38 S
T 39 S
T 40 S
T 41 S
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND
CAVE JCT
APPLEGATE LAKE
JACKSONVILLE
SISKIYOU CO
DEL NORTE CO
SISKIYOU CO
T 48 N
R 4 E
R 12 W
Humboldt Base and Meridian
Mt Diablo Base and Meridian
Donation Land Claims in the study area were clustered in these shaded sections across 14 Townships.

All DLCs were located either on agricultural lands, along gold-bearing water sources (though DLC lands were not available for mineral patent), or along pack trails. Most possessed access to several or all of these resource-generating locations. At least one third of the original DLC claimants have geographic features still bearing their names. The average size of study area DLCs is slightly above 200 acres, far below the state average of 322 acres. This reflects the fact that many of the claims were filed after the size reduction in the DLC Act. It might also suggest that agriculture lands were not as easily worked in this region as in other portions of Oregon, particularly the Willamette Valley, or that a lower percentage of claimants were married.

By reading the DLC notes of 1853 and 1857, we can find tree size and species information, as well as brief narrative descriptions, for DLC lands. Within the Applegate portion of the study area, the following information regarding species, size and composition, can be recovered from the DLC survey notes.

Applegate Valley Donation Land Claim Information:

Species	#	range (inches)	avg. diam.	% of total
Black Oak	69	3-40	18.1	34.5
White Oak	67	4-40	18.1	33.5
Ponderosa Pine	28	6-48	29.8	14.0
Black Cottonwood	10	4-18	9.7	5.0
Ash	7	6-15	11.7	3.5
Madrone	7	2-15	9.9	3.5
Alder	6	12-18	14.3	3.0
Douglas-fir	4	12-40	25.5	2.0
Cherry	1	5	5.0	.5
Maple	1	8	8.0	.5
Total	200	2-48	18.7	(100.)



Applegate DLC lands ranged from some 1,046 feet in elevation at Murphy (Murphy DLC), to 1,240 feet on Missouri Flat (John Davidson DLC), to 1,466 feet at the junction of the Applegate and Little Applegate (Gideon Davidson DLC), to some 1,530 feet along Forest Creek above Ruch (Bishop DLC), and up to approximately 2,600 feet on Hopkins Gulch at Sterling Creek (Hopkins DLC). Across this landscape, the sampling of the DLC survey reveals some 82% of the trees were black oak, white oak, or ponderosa pine. This is consistent with the species composition of oak/pine woodland or savannah. The 18.1-inch average diameter for both oaks, and the 29.8-inch average for pine evidence a strong possibility much of these lands were of late successional stage.

The Hopkins DLC at higher elevation shows a marked contrast from the vegetation averages displayed by the other DLCs. Here surveyors marked six of the seven madrone chosen for blazing

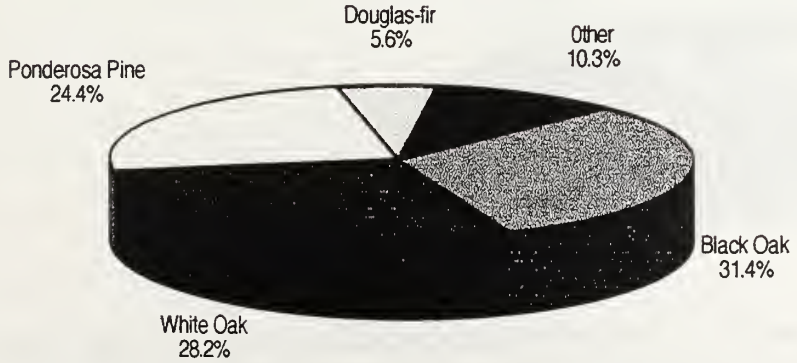
across the whole drainage. They found half of the Douglas-fir and no pine. Such findings indicate a mixed-conifer community of moderate temperature and moisture, with fertile soils.

A noteworthy presence of ponderosa pine was found by surveyors on the Davidson DLC and Brown DLC, in adjacent sections near the confluence of the Applegate and Little Applegate rivers. Here grew approximately 30% of the pine marked across the watershed. On these sites, pine comprised some 27% of the marked trees, in contrast to the 14% average across the drainage DLCs. These pine were also significantly larger, displaying an average diameter of 36.5-inches, which amounts to 120% of the watershed average 29.8-inches.

DLC surveyors also provided brief, fragment-sentence narrative descriptions of surveyed lands. For the Applegate Valley DLCs, these descriptions almost invariably included reference to "open pine and oak" or "scattering pine and oak". The presence of "timber" was also common, as was reference to the quality of the land as "1st rate" or "2nd rate", and "level", indicative of valued agricultural lands. The Hopkins DLC alone was described as possessing "prairie," quite likely a reference to grassy, southern aspect, open slope.

Upper Illinois Valley Donation Land Claim Information:

Species	#	range (inches)	avg. diam.	% of total
Black Oak	130	3-36	13.9	31.4
White Oak	117	3-48	15.3	28.2
Ponderosa Pine	101	5-40	19.0	24.4
Douglas-fir	23	4-60	26.1	5.6
Ash	16	4-15	10.6	3.9
Cedar	7	12-24	16.3	1.7
Sugar Pine	5	12-60	33.6	1.2
Madrone	4	3-18	11.8	1.0
"Jack Oak"	3	5-10	7.0	.7
Maple	3	4-15	10.3	.7
Alder	3	12-20	17.3	.7
"Thorn"	1	3	3	.2
Cottonwood	1	4	4	.2
Total	414	3-60	16.3	(99.9)

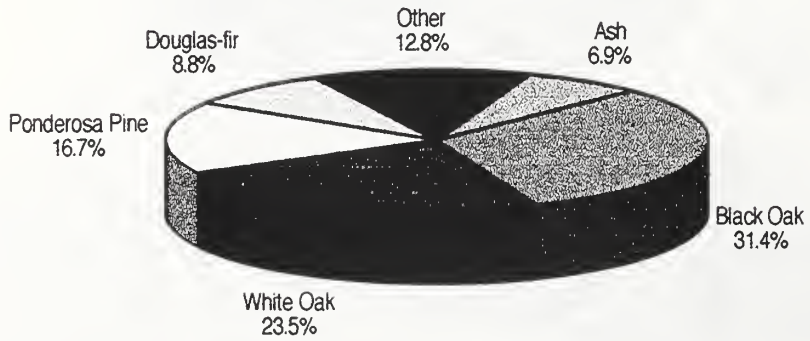


Illinois Valley DLCs along the Illinois River ranged in elevation from approximately 1,230 feet where Reeves Creek enters the Illinois below Eight Dollar Mountain (Reeves DLC), to 1,391 feet where Wood Creek enters the Illinois below Indian Hill (Sibley DLC). Deer Creek DLCs emanated from the junction of Crook's Creek at 1,430 feet (Mooney DLC). In the vicinity of Sucker Creek, Althouse and Waldo, elevations ranged from approximately 1,370 feet along lower Sucker and Althouse Creeks (Briggs DLC), to 1,520 feet up Democrat Gulch (Platter and Beach DLCs), to 1,567 feet at Waldo.

Across this landscape, the sampling of the DLC survey reveals that some 84% of the trees marked were black oak, white oak, or ponderosa pine. This is very similar to the composition pattern of the Applegate DLC (82%). In the Illinois portion of the study area, however, the average diameter for these species was considerably less. Black oak averaged 13.9-inches in diameter, white oak 15.3-inches. The 19.0-inch average for Ponderosa pine is 64% of the Applegate average size of 29.8-inches. Such marked distinction suggests that, as a whole, the Illinois Valley DLCs were at an earlier successional stage than the Applegate.

Deer Creek Donation Land Claim Information:

Species	#	range (inches)	avg. diam.	% of total
Black Oak	32	5-30	13.8	31.4
White Oak	24	6-48	19.0	23.5
Ponderosa Pine	17	6-40	20.2	16.7
Douglas-fir	9	6-40	26.0	8.8
Ash	7	4-12	10.3	6.9
Madrone	4	3-18	11.8	3.9
"Jack Oak"	3	5-10	7.0	2.9
Sugar Pine	2	36-60	48.0	2.0
Alder	1	20	20.0	1.0
Cedar	1	24	24.0	1.0
Maple	1	4	4.0	1.0
"Thorn"	1	3	3.0	1.0
Total	102	3-60	17.3	(100.1)



The Deer Creek DLCs (7 total), shown above in isolation from other Illinois Valley DLCs, display a noticeable variation from the remainder of the Illinois Valley. Here, oak and pine comprised a substantial though considerably diminished 71.9% study area. Douglas-fir, on the other hand, were marked twice as often, and comprised nearly 9% of the trees. Similarly, ash were marked

more than twice as often, and comprised 7% of Deer Creek markings. Such differences suggest the Deer Creek DLCs were located in a transition zone from the oak-dominated savannah or woodland into a more moist, mixed conifer or Douglas-fir zone

A concentration of ponderosa pine was found at several locations within the Illinois Valley DLCs. On the two Reeves family DLCs on Reeves Creek below Eight Dollar Mountain, 53% of the marked trees were pine, with an average diameter of 24.3-inches. Further up the Illinois, on the Ross, Mendenhall, and Turner DLCs in the north-west corner of T40S R8W, 55% of the marked trees were Ponderosa, with an average diameter of 16.2-inches. Nearly one-third of the ponderosa pines marked across the entire Illinois Valley were found in these two areas. The smaller diameter average of the latter area -- 75% of the entire study area average of 21.3-inches—suggests this area was at an earlier successional stage than other areas.

The narrative descriptions of DLCs across the Illinois Valley provide an interesting sketch of the land. Most parcels are described as under cultivation or with fields. Turner (T40S R8W; 322 acres) was "mostly under cultivation," Ross (T40S R8W; 161 acres) "half under cultivation," and Watkins (T39S R8W; 160 acres) "all under fence and cultivation. 1st rate soil." About half of the parcels were said to possess a "house" or "home."

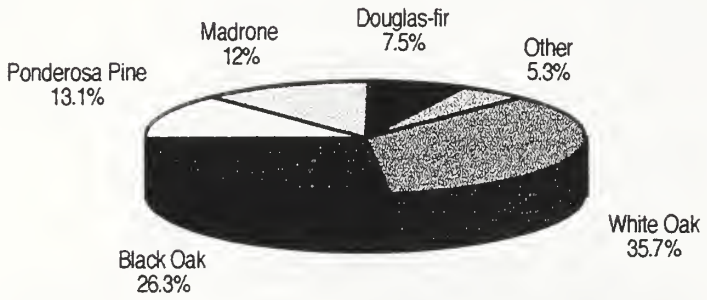
All Illinois Valley DLC narratives included reference to water. Often, these references were to the more obvious Illinois River, Althouse Creek, Sucker Creek, and Deer Creek. However, common reference was also made to "branches" and "springs," as well as the "bayou of Deer Creek" (Dickerson), "bayou of Sucker Creek" (Briggs), "overflow" of the Illinois (Reeves), and "slough" (Kerby, Hicks). Such references suggest that although early miners frequently lamented the lack of water, this lack existed in reference to mining activity and not to the existence of significant areas of riparian habitat in drainages across the study area, including those of a more slow-moving nature.

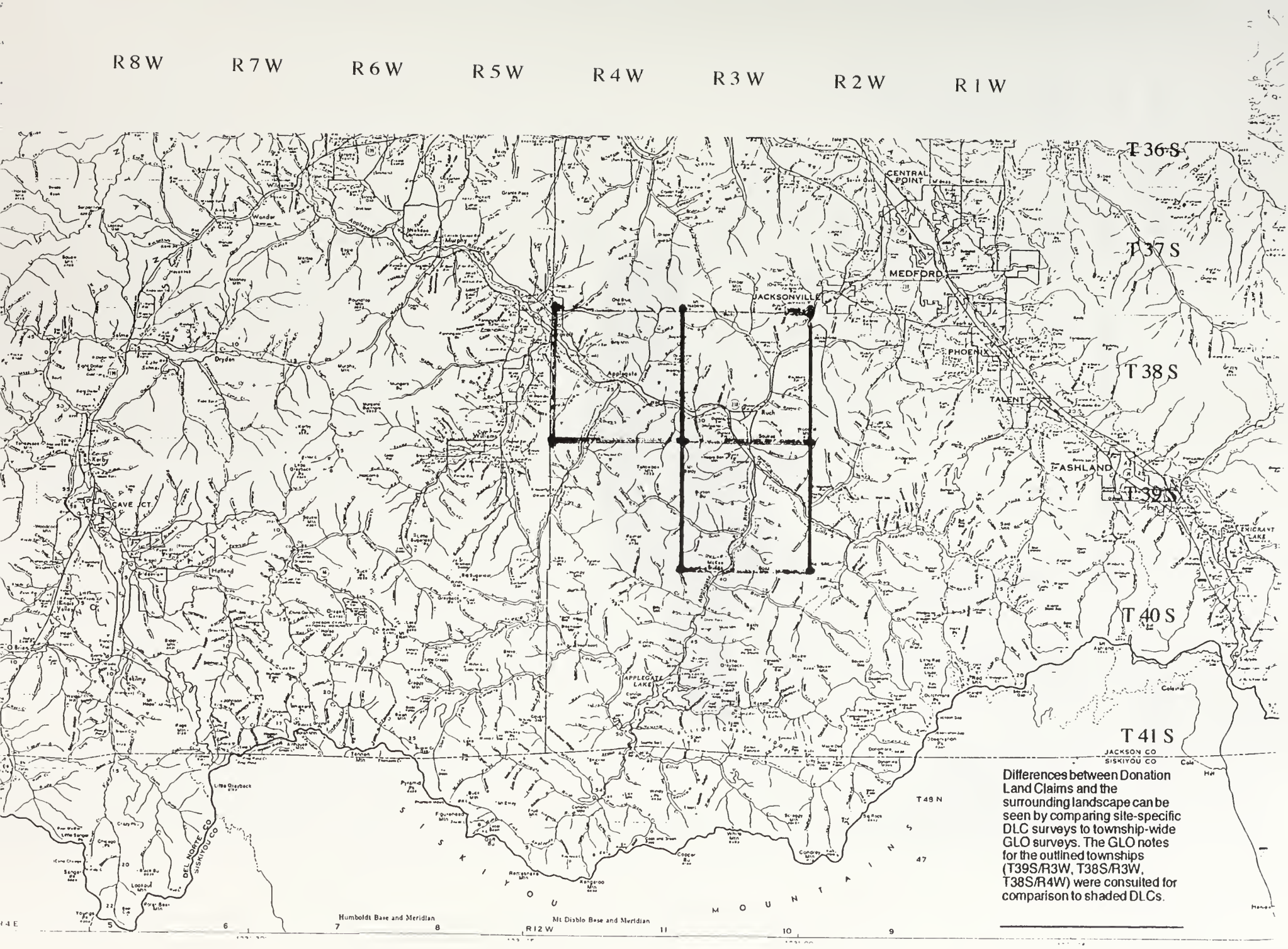
Comparisons of GLO and DLC Survey Data

Ten of the above Applegate DLCs lay in townships T38S R4W, T38S R3W, and T39S R3W. By reading GLO notes for these townships, we can derive vegetative information on the townships in general, and note differences between the DLC lands and their surrounding matrix. Following species-size information on the townships is species-size information on the DLC within these townships.

GLO: T38S R4W

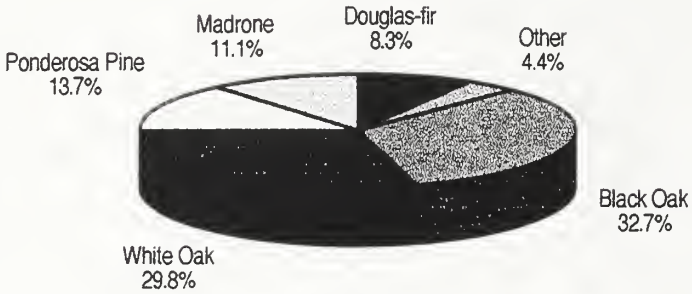
Species	#	range (inches)	avg. diam.	% of total
White Oak	95	4-30	13.4	35.7
Black Oak	70	3-36	11.9	26.3
Ponderosa Pine	35	6-60	22.1	13.1
Madrone	32	3-18	6.8	12.0
Douglas-fir	20	3-36	14.0	7.5
Plum	4	4-10	6.8	1.5
Cottonwood	3	8-18	14.7	1.1
Maple	3	8-30	7.3	1.1
Manzanita	1	8	8	.4
Cherry	1	4	4	.4
Ash	1	8	8	.4
Alder	1	8	8	.4
Total	266	3-60	13.2	(99.9)




R8W
R7W
R6W
R5W
R4W
R3W
R2W
R1W
T 36 S
T 37 S
T 38 S
T 39 S
T 40 S
T 41 S
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND
APPLEGATE LAKE
JACKSON CO
SISKIYOU CO
DEL NORTE CO
SISKIYOU CO
Humboldt Base and Meridian
Mt Diablo Base and Meridian
R12W
T 48 N
Differences between Donation Land Claims and the surrounding landscape can be seen by comparing site-specific DLC surveys to township-wide GLO surveys. The GLO notes for the outlined townships (T39S/R3W, T38S/R3W, T38S/R4W) were consulted for comparison to shaded DLCs.

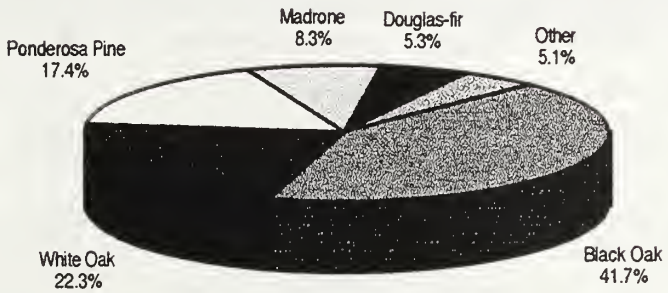
GLO: T38S R3W

Species	#	range (inches)	avg. diam.	% of total
Black Oak	103	3-36	12.3	32.7
White Oak	94	3-40	14.6	29.8
Ponderosa Pine	43	5-48	24.6	13.7
Madrone	35	2-20	9.4	11.1
Douglas-fir	26	4-60	21.7	8.3
Cottonwood	6	10-40	24.0	1.9
"Bugwood"	4	2-4	3.5	1.3
Plum	2	8-10	9.0	.6
Manzanita	1	8	8	.3
Ash	1	12	12	.3
Total	315	2-60	15.2	(100.)



GLO: T39S R3W

Species	#	range (inches)	avg. diam.	% of total
Black Oak	110	2-36	13.1	41.7
White Oak	59	2-22	9.1	22.3
Ponderosa Pine	46	6-48	23.6	17.4
Madrone	22	1-24	8.7	8.3
Douglas-fir	14	5-36	21.7	5.3
"Bugwood"	3	4	4.0	1.1
"Jack Oak"	2	2-4	3.0	.8
Live Oak	2	3-10	6.5	.8
Manzanita	2	4-6	5.0	.8
Alder	2	2-10	6.0	.8
Ash	1	10	10.0	.4
Plum	1	4	4.0	.4
Total	264	1-48	13.8	(100.1)



GLO: T39S R3W, T38S R3W, T38S R4W

Averages of five most common species across these townships:

Species	#	range (inches)	avg. diam.	% of total
White Oak	299	2-40	13.7	35.4
Black Oak	232	2-36	11.4	27.5
Ponderosa Pine	124	5-60	23.5	14.7
Madrone	89	1-24	8.3	10.5
Douglas-fir	60	3-60	19.1	7.1
Total	804			95.2

DLC: within T39S R3W; T38S R3W; and T38S R4W

Averages of six most common species in DLCs across these townships:

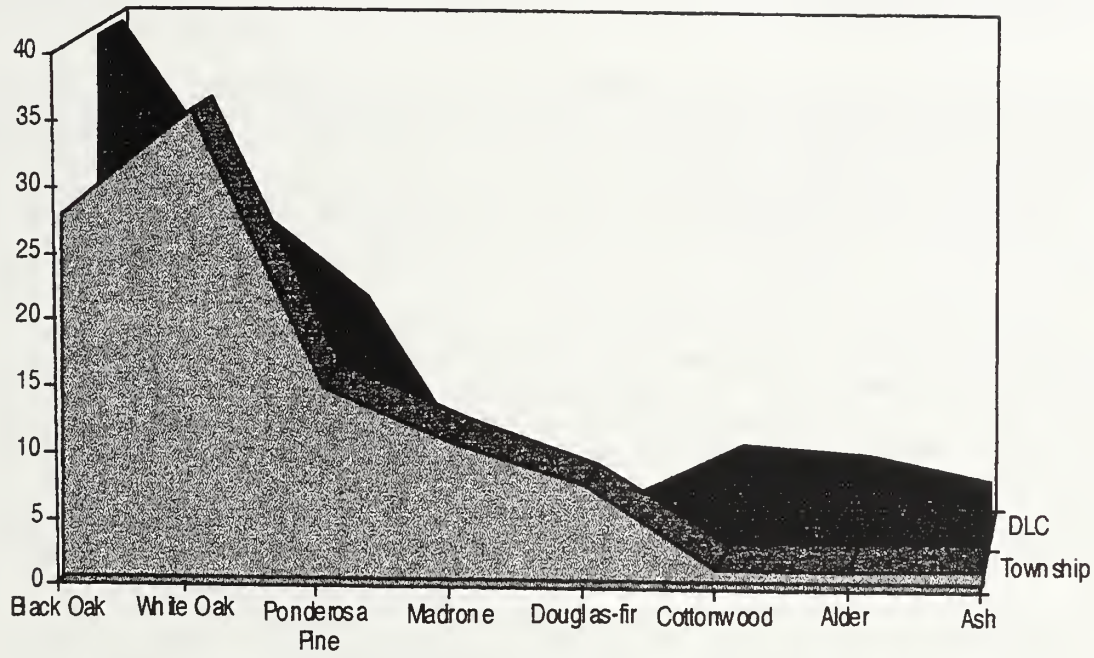
Species	#	range (inches)	avg. diam.	% of total
Black Oak	41	5-40	20.3	39.4
White Oak	26	4-40	16.1	25.0
Ponderosa Pine	18	12-48	32.4	17.3
Cottonwood	6	4-18	9.7	5.8
Alder	5	12-18	14.8	4.8
Ash	3	12-15	13.0	2.9
Total	99			95.2%

DLCs within T39S R3W, T38S R3W, and T38S R4W display a pattern consistent with the whole of the Applegate Valley DLCs. 81.7% of marked trees were black oak, white oak or ponderosa pine; the six most common species remain the same. (black oak, white oak, ponderosa pine, cottonwood, ash, and alder) When these DLCs are compared to vegetation averages from the townships at large, however, notable changes emerge.

While these DLCs display a similar six most common species—black oak, white oak, ponderosa pine, cottonwood, alder, and ash—the broader township level displays a different five most common species—white oak, black oak, ponderosa, madrone, and Douglas-fir. In both cases, these most common species, by coincidence, represent 95.2% of the marked trees.

Township-wide		DLC only	
White Oak	35.4	Black Oak	39.4
Black Oak	27.5	White Oak	25.0
Ponderosa Pine	14.7	Ponderosa Pine	17.3
Madrone	10.5	Cottonwood	5.8
Douglas-fir	7.1	Alder	4.8
		Ash	2.9
Total	95.2%		95.2%

Species Composition by Percentage: Township -- vs. -- DLC



These differences highlight the settings of Applegate DLCs. Cottonwood, alder and ash are all trees which flourish in the vicinity of water. Settlement, too, flourished where water and riparian zone soils provided the foundation for agriculture. The higher percentage of California black oak on DLC lands points to a tendency for black oaks to favor valley bottoms and lower hills, while their Oregon white oak relatives roam higher upslope and mix more readily with Douglas-fir.

All species show a decrease in average diameter when measured across the townships, as opposed to within the DLCs. Black oak was found at 63% (11.4" to 18.1") of its DLC average, Douglas-fir at 74.9% (19.1" compared to 25.5"), white oak at 75.7% (13.7" compared to 18.1"), ponderosa pine at 78.9% (23.5" compared to 29.8"), and madrone at 83.8% (8.3" compared to 9.9"). The cumulative decrease for these species—from 19.8" to 14.3"—places the average across the townships at 72.2% of the DLC average. This decrease is likely a function of elevation and resultant environmental effect. For instance, trees of spacious oak savannas and woodlands tend to display greater spacing, promoting fewer trees as well as larger individual average size over given areas. In the hills of these townships, mixed-conifer forests decrease spacing and increase competition, driving the average diameter down. The presence of southern grassy openings, and the likelihood that at least some portion of the forested hills had experienced stand replacement fires with a resultant early successional forest, would also work to further decrease average diameter.

The greater presence of madrone and Douglas-fir on the townships also suggest a transition into mixed-conifer forests outside the main areas of settlement. Likely these were Douglas-fir dominant. These township readings show a close parallel to the readings on the Hopkins DLC. As noted earlier, the Hopkins site displayed more madrone and Douglas-fir than other DLCs, suggesting a presence in a mixed-conifer forest as opposed to oak savannah or woodland. It is interesting to note that while the majority of Applegate DLCs went on to experience a rich agricultural heritage with the passing of the mining era, the Hopkins site proved ill-adapted for successful agricultural development. By 1870, it stood vacant; Daniel Hopkins abandoned his

claim to purchase property down on Jackass (Forest) Creek, where he farmed and built a sawmill.[116]

Surveyors' Narratives

The narrative reports in these GLO surveys provide another glimpse of the land, and a glimpse into public attitudes as well. In the GLO survey notes for T38S R4W, we read that the southern boundary of the township is a "high rocky mountain." Indeed, it is "very mountainous, steep and rocky." Today, few people would describe this line across lower Thompson Creek in the same way. However, not all of the township is reported so rugged. "The middle and west part is good second rate land, rolling, and well timbered with pine and oak and on Applegate Creek with [Cottonwood]." In T39S R3W we read of "south slopes covered with grass."

We also find reports of resource activity. "Gold is found on Applegate Creek and several hundred men are now engaged in mining, generally with good success," reads the surveyor's notes. In T39S R3W, "Applegate Creek forks . . . , the main creek coming from the south. There are gold mines along both forks, through the entire township." In anticipation of future resource use, the surveyor notes the boundary between sections 15 and 16 would provide "good grazing."

It is also interesting to note the numerous references to "undergrowth" in the notes—at places, "very thick." This is a recurring theme throughout these townships. Primarily, it is made in reference to plum, manzanita, greasewood, shrub oak, hazel, live oak, and laurel.

In general, surveyors are interested in reporting the status of the land with regard to settlement. The "township [T38S R4W] will admit of considerable settlement and should be subdivided." The southwest portion of T8S R3W "is good farming land and should, therefore, be subdivided." Signs of a new relation to the land, a newly emerging narrative.

A Language of Encounter: In Conclusion

A primary result of the GLO and DLC surveys was that landscape description followed a compass-point orientation, rather than taking its cue from natural landscape features. Straight lines cut across open areas and over hills, irrespective of natural boundaries such as streams, rivers, slopes, and meadows, producing the patchwork landscape now so familiar. According to Boag, one effect of these new surveying requirements was that settlers were estranged from the land. "Settlers thereafter no longer had the choice of how and where to lay out a claim with reference to the idiosyncrasies of the local landscape."[117] By the time settlers reached the study area, they were thinking in squares and rectangles. The language of their encounter reflected this. They did not map and claim their lands in reference to features such as streams, oaks or springs, but in reference to numbers, chains, degrees, and townships.

This language of geographic encounter represented an immediate change in comparison to the previous inhabitants. The prehistoric natives were not only more likely to inhabit the region in reference to local idiosyncrasies, they were also unlikely to think of private ownership as an issue of primary importance. Indeed, the personal exclusion of land from the public base for solely private gain is a notion foreign to native landscape use. In the native world, the landscape, individual and community are interwoven in relations of obligation.[118] An immediate consequence

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[116]Black and Black, *Ruch*, p.24.

[117]Boag, *Environment*, p.117.

of the Donation Land Claims Act was that settlers began to fragment the landscape. Private and public holdings were set against each other. Land use became restricted and focused. The landscape itself was seen more as an assortment of unconnected parcels than as a whole. This tendency to think of the land in unconnected units and to consider private holdings withdrawn from discussions of public obligation has fostered a lasting legacy.

As government surveyors brought the region under cadastral control, laying lines across the landscape, they signified a transition movement. The land they walked at the conclusion of this earliest era of settlement was very similar to the land walked by the grizzly at the opening of this era. The brushfields surveyors struggled through were the same ones the grizzly had skirted. The marshes and sloughs they noted were the same ones the grizzly had targeted for early season foraging. The expansive conifer forests, dominating the landscape at elevations above settlement, still spread roadless.

Differences existed as well. In important ways, what they reflected was not a new presence but an absence. This absence was born of removal. Across the landscape, newcomers to the region practiced removal. Beaver were removed from riparian communities across several vegetative zones. Not many years later, gold was feverishly removed from these same areas. Ponderosa pines were removed for construction, and oaks for the making of fields and pasturelands. Out on the dry oak-conifer bottomlands, these latter removals began the most visible alteration of the landscape.

Removal emerges as the central practice in a new regime of regional land management. Of course, removal was also the answer to the annoying presence of an old regime of land managers. These were handily removed at the first opportunity.

What fuels a practice of land management by removal? It is interesting to note that none of the specified removals was an end in itself. Each was a means to other ends. Beaver were removed for cash and to quell a fear born of national insecurity at the forefront of colonial expansion. Gold was removed to send home, or to supplement the farm, or to stake a new life. Pine and oak were removed to recreate homes and fields left behind, and to provide those spaces necessary for the "expansion of civilization." The natives were removed, quite simply, because the new arrivals to the region could find no room in their vision for sharing the land with a people so different. In none of these cases was the land, its inert mineral contents or its living occupants, understood as deserving of care. It is the inability to care for the land and the native people of the land that fostered the practice of removal.

As settlers came, they imposed settlement patterns brought from back east, from Ohio or Kentucky or Illinois. In their minds and hearts were ideas about God and justice which came from the realms of heaven or of reason. In both instances, the land—and its residents—lay as an obstacle to be removed; the wilderness, as a malign presence to be tamed.

Wilderness, etymologically, can be defined as "a self-willed land," a land free from human imposition. It was just such a land that early settlers encountered and strove to change. True, Native Americans imposed their will on the land, but this imposition was of a clearly different order than that of the newly arrived Euro-Americans. In their removal of species and minerals, in laying out straight lines, these new arrivals labored to alter the will-of-the-land, to impose their own will *on* the land. It is this imposition of a new human will on the landscape that fueled the environmental changes represented by the earliest era of Euro-American settlement.

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[118]However, some "special areas" of southwest Oregon, for instance, select fisheries, or favorite oak groves, were subject to private (family) "ownership," with complex customs of use reciprocity. LaLande, personal communication.

CHAPTER TWO

SETTLING DOWN: 1857-1900

Usual Happenings

When A. G. Walling described the environment in southern Oregon through the eyes of the newcomers from the East, he conjured the vision of nature as the welcoming mother, freely offering her generous supply of all that human life needs for life and health. In his words, the valley is already fruitful, fertile and productive. Berries, acorns, deer and elk, three kinds of fish swimming in crystal waters—all these presented themselves graciously for human sustenance. No doubt the trail-worn pioneers thought they'd died and gone to heaven. Toil and suffering at an end. A moveable feast at their fingertips.

Such a vision is at odds with another, more strained, tone in Walling's voice. It's a tone which probably better characterizes the actualities of life for these newcomers, a life of never-ending struggle to extract from a mischievous, reluctant or downright hostile natural world the basic necessities of life. Walling, of course, phrased these grim realities in the triumphal tones of many nineteenth-century American historians:

> To penetrate into unexplored wilds and there subdue the earth, and lay the foundations of a state was to them a second nature - a desire transmitted from their parents, whose glorious characteristic was also to advance the bounds of progress and civilization, and make glad the waste places where man had never previously trod. Theirs was the mission to keep forever in the fore-front of the battle which man is ever waging with the forces of nature, and from the wildest region accessible to man to send back the glad news that freedom had found yet another breathing place.[1]

Here, the "grassy plains, the wooded slopes, and tree-fringed watercourses of Southern Oregon" have become "unexplored wilds," "waste places" and the militant "forces of nature." It takes exceptional people to wage this battle, people like those who came to southern Oregon whom, Walling tells us, were "cradled in hardship," outstripping all human beings who have ever lived by virtue of their "strong and self-reliant character."[2]

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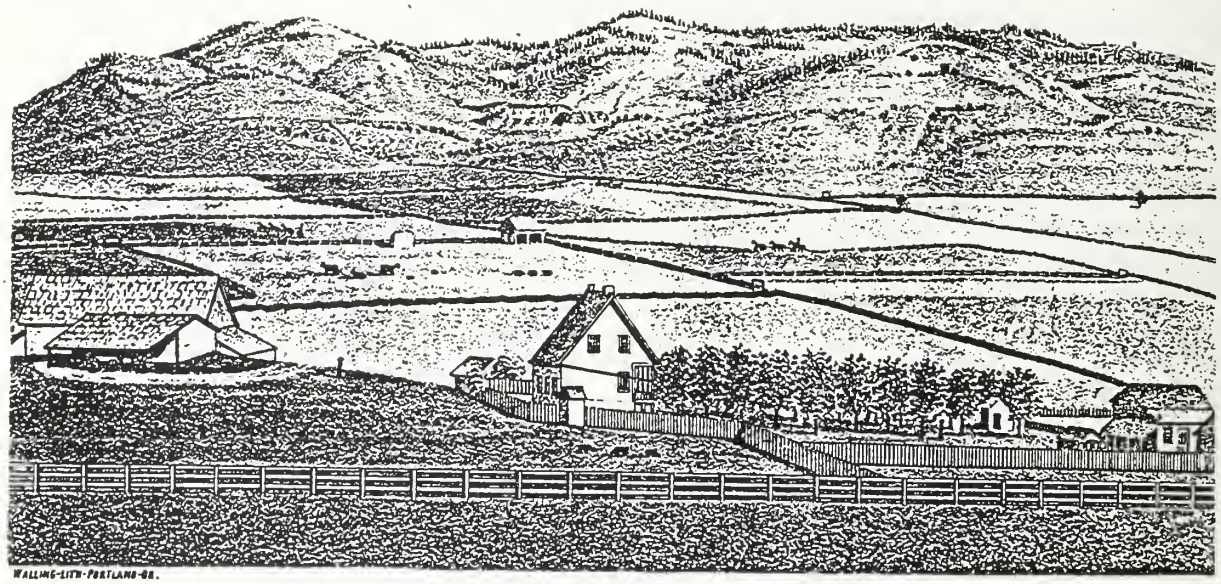
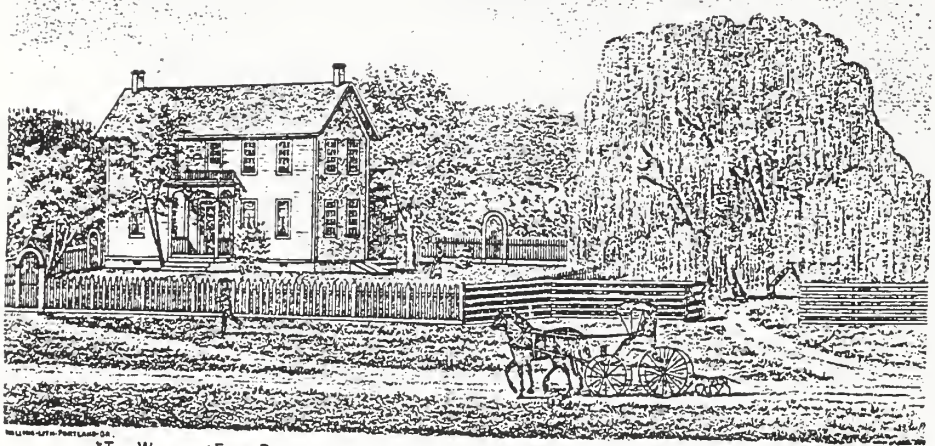
[1]Walling, *History*, pp.333-334.

[2]Ibid., p.333.

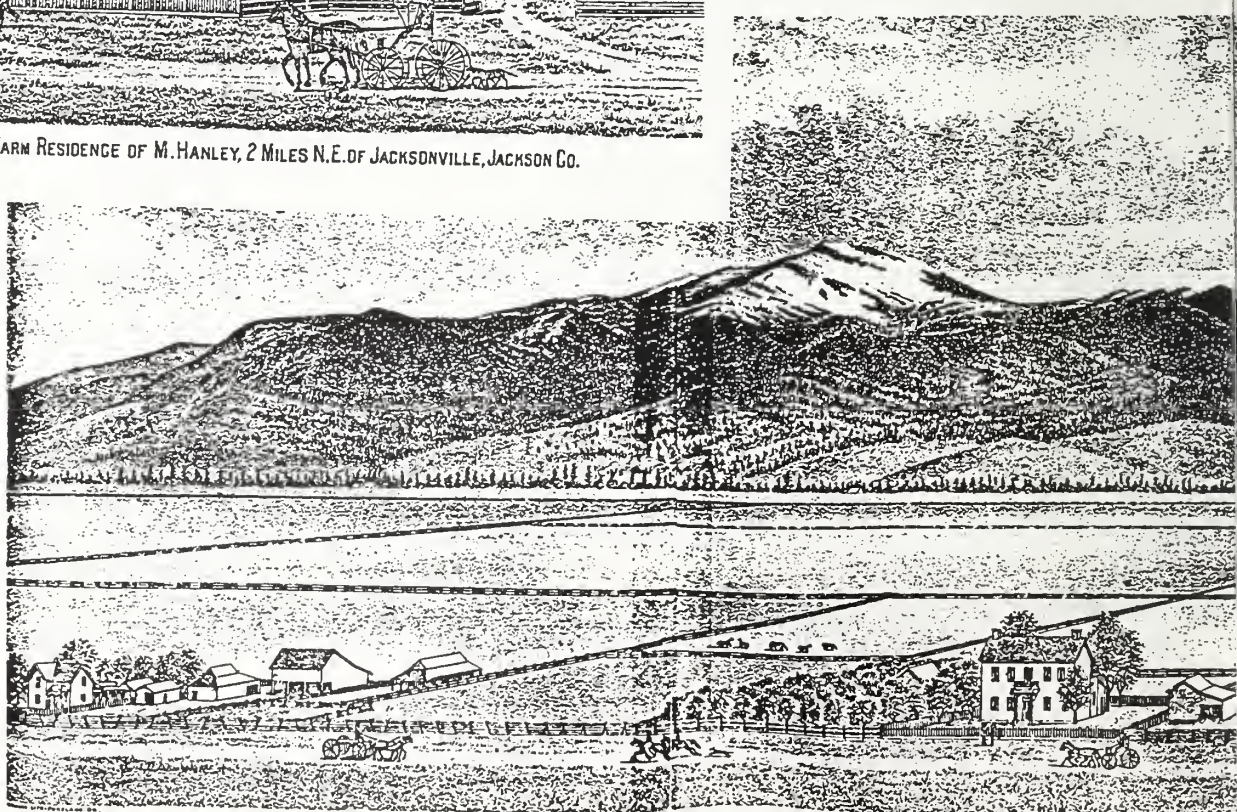


FARM AND RESIDENCE OF JOSHUA PATTERSON, 5 MILES NORTH OF ASHLAND.



"THE WILLOWS" FARM RESIDENCE OF M. HANLEY, 2 MILES N.E. OF JACKSONVILLE, JACKSON CO.

Lithographs from Wallings' *History of Southern Oregon* replicate the stamp of "progress and civilization" upon the landscape of southern Oregon. Here freedom's "breathing place" is evidenced in a pastoral vision of well-traveled straight roads, squared fields, miles of fences, and handsome homesteads with carefully groomed yards. The toil and suffering of settlement and cultural transition are nowhere to be found. Beyond Wagner Butte (lower scene) lies the Applegate River watershed.



WAGNER BUTTE.

FARM RESIDENCES OF R. V. BEALL AND THOS. F. BEALL, NEAR CENTRAL POINT, JACKSON CO.

Walling, who had participated in the initial settlement of the region thirty years before, seems a bit nostalgic as he writes his narrative in the 1880s. Perhaps the people of this latter time appear soft and self-indulgent, compared to their heroic forebears, founders of the new society in southern Oregon. Once freedom's "breathing place" has been secured, things tend to get a bit predictable, perhaps even boring. Here is the epigraph he offers for our second era in the environmental history of the Applegate and Illinois valleys:

> . . . in comparison with the events of 1851-6, the remainder of the chronicles of this region are singularly bare and uninteresting. The sharpest discernment sees little in the later years but the usual happenings of a settled and somewhat progressive community who have achieved exemption from savage foes, and from want and scarcity of subsistence.[3]

Our Mr. Walling has run out of steam. He's not alone. The leading newspaper in San Francisco, early in our period, gives the same impression that things have slowed down in Oregon. It peruses the Oregon newspapers, looking for something to pass along to its readers, and finds: "There is no news of the slightest interest to Californians in any of the papers received." And again: "The papers are perfectly barren of news."[4]

It is this, in some ways this "barren" period, these "usual happenings," which perhaps extend over the next century and a half to our own time, that will be the focus of the remainder of this report. Each period has its own themes. In the era to which we are now turning, from the announcement of statehood in 1859 to the turn of the century, we see what Euro-Americans have come to identify as normal life gradually materializing in the study area. Rural communities sprang up, and a network of roads spread up valley floors and over the passes to connect them to one another and to the world beyond. Telegraph wires established connections with distant places. Forests and meadows were transformed into farmers' fields, and the resulting agricultural surplus made its way to the developing markets. New mining technologies arrived, promising continual rounds of boom and bust. Most revolutionary of all was the coming of the railroad, making the commodities of southern Oregon, virtually all of them in this period extracted from the land and inexorably altering the landscape, available to the clamoring populations of growing American cities, east and west.

Our question then: Given that, as Walling reports somewhat breathlessly, freedom has found yet another breathing place, what has freedom wrought upon the land?

Clearing

As noted in the first chapter, one of the first endeavors settlers undertook was clearing the land. Without clearing, settlement was out of the question. With the removal of the study area's natives, a more stable infrastructure, and an increasing population, clearing became a more common and widespread practice. The most desirable sites for home, field, and pasture were those free from brush and trees, open to easy building, planting, and grazing. Indications are, not much land in the study area was open to this degree, and that which was, was claimed quick and early, primarily in the earliest era of settlement under the aegis of the Donation Land Claim Act.

> There was a homestead that could have been taken up sooner, but no one wanted it because they said, 'There are too many trees.' That parcel of land is now part of Cave Junction.[5]

As with the miners, trees were a hindrance to the farmers.

> When the [Illinois] Valley was being settled, the pioneers cleared the land for farms and had little use for the trees, which were often piled and burned. Some of the forests began to

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[3]Ibid., p.344.

[4]Gilmore, *Rogue River Valley*, p. iv.

[5] Francis, *History*, p.23.

> disappear, but the stage coaches still went most of the way through the Valley with miles of trees on either side of the road. Then, as the population grew and there was more demand for lumber, there were a few sawmills.[6]

Presumably, the trees began to fall back from the sides of the roads.

Such clearing of the forests for agricultural development was a pattern that spread with settlement across the country. The peak years of clearing for agriculture and settlement within the study area appear to roughly coincide with the peak years for clearing across the whole of Oregon. According to one source, approximately 1.8 million acres of Oregon lands were cleared between 1860 and the turn of the century.[7]

Connecting

Another one of the first things southern Oregon's newcomers did with their freedom was to connect up with the outside world. In some ways, this was an irony. They expended remarkable energy and endured extreme loneliness and privation to reach an isolated portion of the expanding American world, as if they were drawn to isolation. But clearly, they were not. As soon as they arrived, they worked equally hard to banish their isolation, to connect themselves up with the world they left behind.

Their goal, however, was not sociability. The connections they sought were not for purposes of human interaction. Their energy for connection seems less directed at their neighbors up the draw, than at the outside world. The implication seems to be that they were here for self-advancement, for opportunity to thrive materially. Their roads and wires and rails, in the first instance, were meant to supply them with the goods they never meant to leave behind; in the second instance, just a few years later, to supply the people they left behind with the fruits of their labor, the goods they hoped to produce and exchange for cash.

These goods have implications for this report. In the former category were the technologies with which the earth was re-shaped: pans and axes and plows and barbed wire and road scrapers and bridge supports and donkey engines and pipe and hydraulic hose nozzles so impressive in their ability to move dirt as to be called "giants." In the latter category contained the yield of the earth and of labor in and on the earth: gold and copper, fruit and grain, beef and mutton, lumber and wood products. All of these implied alterations in the landscape.

Roads

> The question of roads has always been an important and ever present one in Josephine County. Permanent roadways are of difficult construction and expensive maintenance, and the traffic of the country necessarily small. Many attempts have been made to secure closer communication with outside markets, but unavailingly.[8]

Walling's judgment seems to have been confirmed by the inaugural agenda of the Jackson County Commission. One of the first things the newly-appointed commissioners attended to, in 1853, was the matter of public roads. They catalogued existing trails and roads in the county, and declared each one of them a Public Road. A year later, they entertained the petition of a group of settlers that the county build a more direct route from Jacksonville to Crescent City by way of the divide

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[6] Ibid., p.24.

[7] Michael Williams, *Americans & Their Forests: A Historical Geography*, (Cambridge and New York: Cambridge University Press), 1989, pp. 358-361.

[8] Walling, quoted in Hill, *Josephine*, p.5.

between Williams and Deer Creeks.[9] A good portion of their business during those early years continued to center on their constituents' felt need for roads.

The first trade and immigration routes to the Rogue Valley had followed the landscape's most inviting contours, flowing north and south in the valleys between the Cascade Range and the coastal mountains. The Applegate party added their "Southern Road" from the East by way of Fort Hall, Idaho or the Humboldt basin in northern Nevada in 1846. That left a western approach undeveloped.

After the gold rush of 1849, northern California was brimming with would-be and has-been gold-seekers flowing in and out of, and around, San Francisco. The possibility of taking ship passage to the Crescent City area and joining the next gold rush to Sailors' Diggings and Jacksonville, made the development of a western route, from Crescent City to Jacksonville, attractive. By 1853, as we have seen, that route was developed up the Smith River and over the divide into Oregon. In very short order, the route was extended to Kerby, where it veered east and then north over a low divide into Deer Creek. From there it ascended Crooks Creek below Mooney Mountain and descended Cheney Creek to the Applegate River. (An alternate route left Sailor's Diggings and crossed the Althouse and Sucker drainages before ascending Crooks Creek.) It crossed the Applegate by way of a ferry service that operated near the present Fish Hatchery Bridge.

With the activity in the Jackson Creek, Jackass Creek and Sterling Creek mines at full tilt, this first southern Oregon thoroughfare was very soon extended all the way to Jacksonville. In its earliest form, it followed the north bank of the Applegate River upstream about 28 miles before crossing the divide into Jacksonville.[10] For several years, this was an important travel artery for the study area. It brought miners, settlers, and supplies eastward from travel routes on the Coast, and it carried agricultural goods to the port at Crescent City for shipment to San Francisco. For most of that first decade, it was not much more than a broad trail used for foot and mounted traffic and mule trains. By 1855, between fifty and two hundred pack mules may have traversed this route daily.

Some of the drivers on the Crescent City-to-Jacksonville route were professionals. Often Mexicans in the early years, Indians in the later, they represented a western breed who followed the rising demands for packers across the expanding frontier.[11] Others were exhausted or failed miners. One of these was John Tice, an immigrant from Indiana. Tice first passed through the Rogue Valley in 1851, at the age of nineteen. He had little success in mining, so he began packing. Letters he sent back to his parents offer a glimpse of life among the early packers.

Tice ran a pack train of about fifteen mules on the route from Crescent City to the gold fields during the early years. "It is a little over one hundred miles from here to Crescent City," he wrote from Jacksonville, and the round trip took him two or three weeks. With mules running "very high now, from $100. to $200. a head," Tice apparently focused on the wheat trade as a means to achieve sufficient return. "There is a great deal of wheat going to be sowed in this valley this season and that makes wheat in good demand. We bought ours for $4.00 per bushel and sold most of it for $10.00 . . . ."

Trusting in the potential profitability of the wheat market, Tice sowed some of his own in the Illinois Valley on shares. By July of 1854, he was looking forward to the return on these shares—"an average crop" which he hoped would yield "say twenty bushel to the acre." He also packed flour. He bought it for between six and nine cents per pound in Crescent City, and his costs for packing it amounted to not less than six cents per pound. Tice figured he had to sell it for twelve-to-fifteen cents per pound to make a profit. All told, Tice was able to clear "about twenty-five dollars on a mule." This suited him, though it didn't lead him to overstate the amenities of his

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[9]Black and Black, *Ruch*, p.13.

[10]Ibid., pp.12-13.

[11]Johnson, *Applegate*, p.12.

chosen trade: "Packing is dirty, disagreeable work," he wrote in 1853, "but it pays us good wages."[12]

A pack route would not long suffice for the transportation needs of the growing community in the gold fields.[13] By 1857, merchants and others at both ends of the route were advocating its improvement.[14] A road commissioner was appointed in April, 1857, and by 1858, a new improved way was opened. This stage road ran further to the west than the previous pack trail, generally following the route of today's Redwood Highway between Selma and Wilderville, over Hays Hill and down along Slate Creek. In 1860, an alternative route along the Applegate was developed, following the south bank through the newly settled area of Williams all the way to the mouth of Thompson Creek. It crossed the river on a primitive wooden bridge at "Bridge Point," where the Applegate community is presently located.[15]

This new Crescent City-to-Jacksonville road became the main artery for the Applegate and Illinois valleys, and has remained so to this day. Packers continued to use the route into the early 1880s, driving as many as sixty mules in a single train. But even these pack trains became more regular and were run as an ongoing, organized business more than as an expression of frontier opportunism. One of the casualties of this routinization was "the broad 'sombrero' of the semi-civilized Mexican packer."[16]

The new road was a toll road, charging $5 for a two-horse team.[17] "[T]he first buggy passed over this route in May of 1858, when a tri-weekly stage service was established."[18] An article in the Jacksonville Reveille, in 1868, reports that at that time the Concord Stage ran from Jacksonville to Kerbyville and Waldo every Monday and Thursday, leaving at 6 a.m. Fare to Kerbyville was $6.50, to Waldo $8.00. At Waldo, connections could be made with Gasquet's mail express or the saddle train to the coast. The return trip to Jacksonville left Waldo every Tuesday and Friday at 2 p.m., and offered connections with the Portland-to-Sacramento stage service at Jacksonville.[19]

Roads continued to be proposed, surveyed, built and improved throughout the period. In 1859, area residents formed the Josephine Wagon Road Company to promote the shorter route from the Applegate to Kerbyville by way of Deer Creek and Murphy Creek. It would have shortened the journey by eight miles, but it was not built at the time.[20] The Jacksonville Democratic News announced, in 1869, that the County Surveyor was surveying the road "down the Applegate" to the Josephine County line. Residents of the Applegate region were pushing for the road to be improved, "making the grade easier," and officially opened as a county road.[21]

In the Upper Applegate, roadbuilding followed settlement. In 1856, a road was put in up the Little Applegate River to Sterling Creek, and then over the mountains and down to Phoenix by way of Griffin Creek. In 1877, a road followed the Applegate River south as far as Squaw Creek. Until the early 1900s, only a pack trail ran from there up Carberry Creek to Steamboat.[22] In 1871, the

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[12]all quotes: J. F. Santee, ed., "Letters of John Tice," *Oregon Historical Quarterly*, XXXVII (March-December, 1936), pp.24-44.

[13] Johnson, *Appplegate*, p.12.

[14]Gilmore, *Rogue River Valley*, pp.214-20

[15]Black and Black, *Ruch*, p. 154.

[16]Walling, *History*, p.370.

[17]Black and Black, *Ruch*, p.14.

[18]Johnson, *Applegate*, p.4.

[19]Jacksonville *Reveille*, November 14, 1868.

[20]Johnson,*Applegate*, p.6.

[21]Jacksonville *Democratic News*, August 21 and 28, 1869.

[22]Black and Black, *Ruch*, pp.14-15.

first county road to the mines in the upper Forest Creek watershed was surveyed. It followed the edges of the hillsides, in order to stay as far as possible from the mining operations in the creek. In 1898, signaling the shift of emphasis from mining to farming, local residents petitioned for the county to re-route it higher still so as to miss their farm fields.[23]

The standard north-south route through southern Oregon continued to develop as well during these early years. Beginning in July, 1860, regular stage service was established between Sacramento and Portland. The trip took thirteen days and passed through Jacksonville. With this service, regular and full-spectrum commercial access to the area was complete.

Wires

These developing roads enabled an expanding network of travel, commodity transport and community development. Their effect was multiplied in 1864, however, when the latest communication technology arrived in southern Oregon. In that year, the telegraph came to Jacksonville. Information now arrived and departed over wires, loosed from the pace of ship or horse travel. The time lapses characteristic of the transmission of information over continental distances were overcome in an instant.

Before the telegraph, the news of the United States Congress's creation of the Oregon Territory on August 14, 1848, would not reach Oregon until Joseph Lane, traveling overland, arrived in Oregon City on March 3, 1849. Similarly, when the Brother Jonathan sailed into Portland on March 15, 1859, it brought the first news that Oregon had become the 33rd state—a month earlier. The telegraph brought instantaneous information from across the continent, and presaged a new era in southern Oregon history. For better or worse, the region became, as Walling put it, "nearly a part of the outside world."[24]

Rails

In the minds of southern Oregonians, the promise of the wires was nothing compared with the promise of the rails. It was the railroad that would finally banish the sense of isolation shared by so many of the region's newcomers. The prospect of a railroad invited the editor of the Democratic News to wax eloquent on the benefits of technology and the future of the region as a whole. In the inaugural edition of the paper, he offered these lines:

We can now sit and listen to the music of the electric current as she travels along the wire; but when her twin brother the Iron Horse, surmounted by that indigenous embodiment of democratic huzzas, the steam whistle, begins to scream upon our mountain tops and through our valley, a new life indeed will be given our people, and a new way opened to the outer world.[25]

This "new life," he said, quoting a Roseburg newspaper, would be characterized by "an intimate commercial relation with the world." Although he didn't explain its contours in very great detail, he offered these general outlines:

The result will be to add great value to lands that now lie waste, unclaimed and unproductive; to stimulate the energy of all the people in Oregon to which it is available, by bringing, at reasonable rates, a supply for their wants and carying [sic] their produce abroad to market. This will draw

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[23]Ibid., p.24.

[24]Walling, *History*, p.345.

[25]Jacksonville *Democratic News*, May 1, 1869.

increase of population, redouble enterprise, and cause us to become a people full of life and action, instead of being a pastorial (sic) and agricultural race, striving to supply all wants by home labor.[26]

It is impossible to know how representative this editor was in his rush to banish the pastoral life, and to replace it with a life of action. Perhaps he spoke for the merchant classes in Jacksonville rather than the farmers in the Applegate. Yet, implicitly at least, he included those farmers, and other workers on the land, in his vision for a railroaded future. Indeed, many farmers clamored for the rails. Not only would this access distant markets, but it would eliminate local mill monopolies as well. And some merchants, by contrast, feared the competition sure to arrive with the rails. Regardless of differences in local opinion, this editor went on in optimism:

The region that now supports less than 100,000 inhabitants can more easily support a million when this railroad is constructed; and that million, profiting by the natural resources at their command, can acquire unlimited wealth.[27]

All this was part of what John and Marguerite Black call a "railroad boom" in southern Oregon.[28] It began early in the 1860s, when Captain John Mullan, traveling through Oregon, bemoaned the lack of connection between the Willamette and Sacramento Valleys and encouraged residents of the Willamette to begin pushing the line south.[29] He was far from alone, of course, in his recognition of the benefits of rail service to the isolated communities of Oregon. The Oregon Democratic Party Platform of 1868 proposed "a judicious system of railroad improvements in Oregon, to develop our vast resources," and urged the United States Congress to make "liberal grants of aid."[30] This represented the most significant appeal for federal assistance in regional matters since the end of the Indian Wars. The platform likely reflects an urge to continue funding that had already begun, since Congress itself had already acted upon such a notion, approving funds for the construction of an Oregon Railroad as early as 1866.[31]

Simon Elliott, a surveyor, actually began surveying a route north from Sacramento in 1863. In 1867, two companies were building competing routes south from Portland. By 1873, the tracks came south as far as Roseburg.

For several years in the 1870s, debate raged in southern Oregon over the route the railroad would follow through Jackson County. Jacksonville was the county seat and largest city, and many assumed it would be the main southern Oregon terminal. But as the financially strapped railroad was approaching Jackson County, it requested financial support from Jacksonville to help defray costs of diverting the line from the more direct route following Bear Creek to the vicinity of Ashland.

Jacksonville refused the railroad's request for funds. Sporting a new fire engine, in the process of constructing a new courthouse, proud of its status as the primary regional center, the citizenry was confident that it merited a railroad station. It seemed that "the majority of Jacksonville's citizens believed the railroad needed Jacksonville more than Jacksonville needed the railroad."[32]

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[26]Jacksonville *Democratic News*, June 5, 1869.

[27]Jacksonville *Democratic News*, June 5, 1869.

[28]Black and Black, *Ruch*, p.91.

[29]John Mullan, "From Walla Walla to San Francisco," *Quarterly of the Oregon Historical Society*, IV (March-December, 1903).

[30]Jacksonville *Reveille*, June 6, 1868.

[31]Jacksonville *Democratic News*, May 1, 1869.

[32]J. B. Dunn, ed., *Land in Common: An Illustrated History of Jackson County* (Medford, OR: Southern Oregon Historical Society), p.43.

To everyone's surprise, "the Oregon and California thumbed its nose at Jacksonville and staked a direct route south along Bear Creek, five miles from town."[33] A group of entrepreneurs less than enchanted with Jacksonville donated 260 acres for a train station. Incredulous Jacksonville residents referred to its barren location as Mudville, Rabbitville, or Chapparral City. The name "Medford" was officially adopted not long before passenger service began on February 24, 1884.[34]

By April of 1884, railroad service had reached Ashland, where the project stalled. Captain Mullan had early recognized that the mountains lying on the Oregon-California border would present a major obstacle to the completion of the railroad. These mountains, he felt, "will not be easily handled. They are high, broad, and broken, and no railroad line can be laid across or through them, except at most enormous cost."[35] Mullan proved correct, for it was this stretch that proved to be the final challenge in connecting Oregon and California by rail.

It took a few years for the Oregon and California, and the Southern Pacific railroads to agree on a financial plan and develop a strategy for crossing the imposing border mountains. Construction resumed, and the "golden spike" was finally driven in Ashland on December 17, 1887.

The operation of through rail service proved a dramatic economic boon to the area, the significance of which can hardly be overstated. The construction of the railroad itself employed workers, drew upon local markets, and produced the largest claim upon timber to date. A contemporary observer noted that "the resources of the saw-mills of the whole region have been brought into requisition to provide the necessary lumber for the bridges, culverts, etc."[36] When it was completed, the railroad carried agricultural goods out of the area to markets both north and south. It also raised the horizon of possible "wants," just as a local editor had predicted, bringing the ever-expanding profusion of industrialism's fruits into the valley.

The railroad was also directly linked to the continuing population increase in southern Oregon. From 1880 to 1890, the population of Jackson County rose from 8,154 to 11,455. This increase, coupled with an increase of nearly the same number from 1870 to 1880, represents the largest twenty-year population increase by percentage from the time of the first settlement until after World War Two.

The railroad changed things in Josephine County as well. Grants Pass's strategic location on the rail route made it the commercial center of Josephine County. Grants Pass, known as Perkinsville in the early 1850s, was little more than a stage station until the railroad came through.[37] In 1883, a town was first surveyed there, and on Christmas eve, 1883, the first passenger train arrived. Only two years later, the Josephine County seat was moved to Grants Pass from Kerbyville. The once-thriving Illinois Valley became the county's backwater.

Essentially, the railroad created Grants Pass and Medford, the region's two leading cities today. Illinois Valley business now flowed to Grants Pass rather than to Jacksonville. At the same time, much of the Applegate Valley's business, especially in the central and lower valley, did the same. Jacksonville entered a period of decline. In 1927, the railroad's impact on the region's locus of power was recognized when Medford became the Jackson County seat.

With the arrival of the railroad, then, the economic climate was prepared for anticipated population and economic booms that actually happened. These, along with the profits generated for the shareholders, were the intended consequences of the railroad. The unintended consequences

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[33]Ibid., pp.43-44.

[34] Lewis A. MacArthur, *Oregon Geographic Names*, 5th ed., (Portland: Oregon Historical Society, 1982), pp.488-89.

[35]Mullan, "From Walla Walla," p.219.

[36]Walling, History, p.381.

[37]Johnson, *Applegate*, p.7.

included the decline of communities off the main route, such as Jacksonville, Central Point and the Illinois Valley; the attendant difficulties of development in communities on the main route such as Grants Pass, Medford, Talent, and Phoenix; and the arrival of a wide range of challenges attendant on the virtually complete restructuring of a region.

The Applegate Valley was not so far removed from the rail line that it suffered quite the fate of the Illinois Valley. But the Applegate Valley probably did develop more slowly than it would have if the railroad had come through Jacksonville. Residents of the Applegate Valley did feel the slight, and made several attempts at bringing a rail line through from Jacksonville to the coast. One survey was made for such a route. According to John and Marguerite Black, "Bertha Barnum of the Barnum family railroad in Jacksonville, bought a piece of land near China Gulch Road to build a depot." But nothing came of it, nor of any other such schemes, and "the land was eventually sold for farming."[38]

In a passage meant to invoke his satisfaction with the progress of the region, but at the same time an implicit warning, Walling states:

> The advent of the iron horse forms, as it were, an epoch in the history of this section hardly second in greatness and importance to the settlement of the country itself. Railroad communication with the outer world is to the inhabitants of Southern Oregon a matter of deepest significance; its effects extending to the very groundwork of society, and penetrating every branch of business and every industrial occupation, and making themselves felt by every individual, no matter in what situation he may find himself. . . .[39]

Again, Walling reflects the ambivalence of these early citizens toward the pastoral land that had, only a quarter century earlier, evoked such effusive descriptions:

> The conditions which surrounded the settlement of this region disappeared with celerity at the first blast of the locomotive whistle, and these mountain valleys became at that moment a part of the world at large, and bade adieu at once to their former seclusion and lax habits of business.

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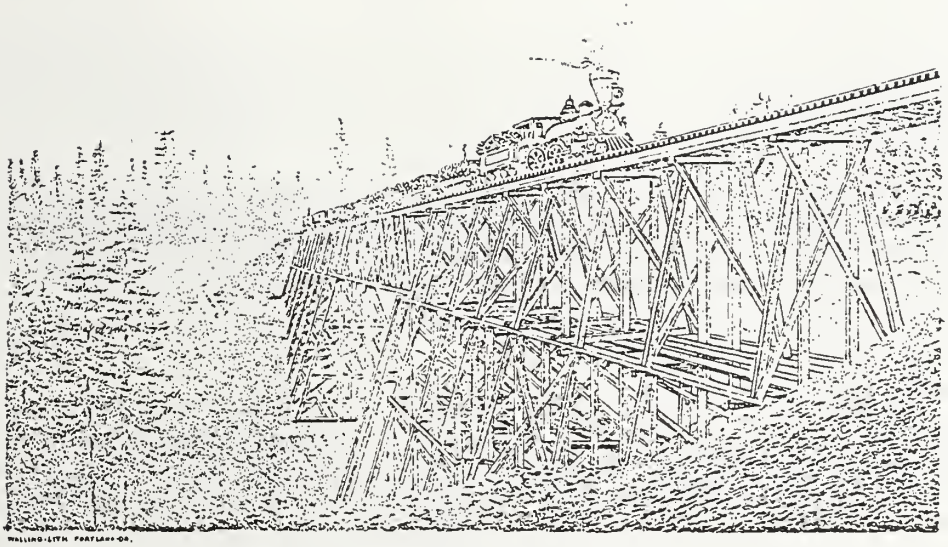
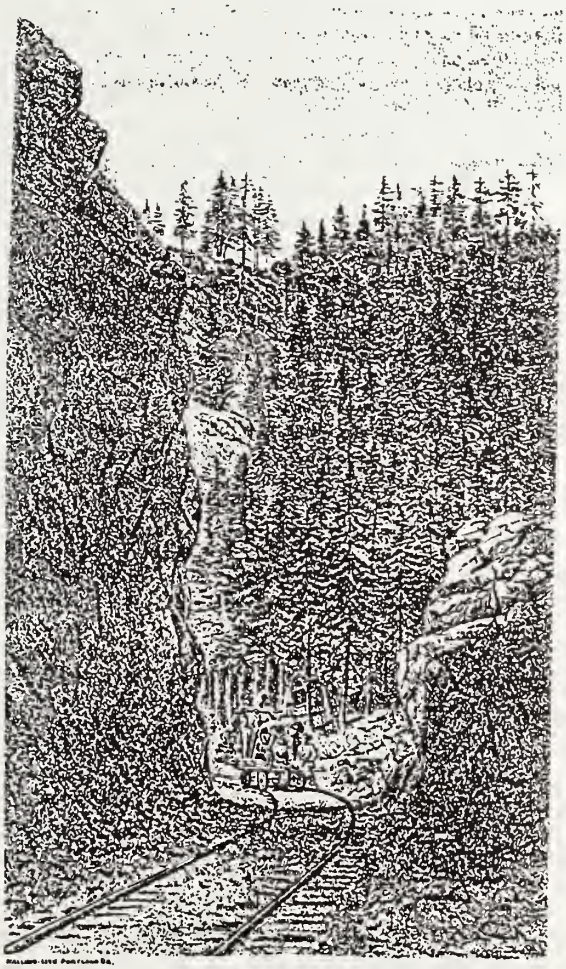
[38]Black and Black, *Ruch*, p.91.

[39]This and the subsequent quotation are from Walling, p.108.



GRAVE CREEK CROSSING. O & C. R. R.



ROCK CUT, ONE AND ONE-HALF MILES NORTH OF TABLE ROCK.
O & C. R. R.

Walling lithographs highlighted rock cuts and bridges to impress upon readers the new technologies arriving with the "iron horse." The railroad brought an impact "extending to the very groundwork of society."

Stopping Places

Along the gradually improving roads of this era, communities began forming around services that could be provided to travelers and miners. These communities also served the social and commercial needs of the growing body of more permanent residents. Many of these were first established in the early period of our study, but took on greater permanency as settled communities during the last decades of the century. Some of them barely made it into the twentieth century, however, before they disappeared altogether.

The first house in the Illinois Valley was built near the mouth of Democrat Gulch by our oft-cited historian Walling, Northcut, and Ball in 1852. Known as Walling's Ranch, it sold supplies to miners in the Sucker and Althouse drainages. On Deer Creek, the DLCs of Henry Wixom and Samuel Mooney were among the earliest examples of an established community. Wixom and Mooney operated "Mooney's Place" on Wixom's land, where they provided accommodation to early travelers. William Hay's DLC, on what is now called "Hayes Hill", became a stopping place mid-way from Waldo to the ferry at Fort Vannoy. During the Indian Wars, it was known as "Fort Hay"; its stockade-style architecture was intended for defense against the natives.[40]

In the lower part of the Applegate Valley, Alexander Jess operated a ferry at the mouth of Slate Creek. Just upstream was Junction House, built in 1857, a stopping place and store which became the foundation of Wilderville. In 1858, Hugh Heaps opened "Prospect Ranch on Applegate Creek" in the vicinity of Bernard Murphy's DLC, with overnight accommodations. (When Hugh's cook married, he advertised in the Crescent City newspaper for one who might "contract a partnership with him for life.")[41] Later, Lewis Hayes bought the property and "set himself up in the freighting business, while travelers were accommodated at the hotel-home." His barn held eighty horses. Hayes' son, David, remembered the tenor of life in those early days, which Olga Weydemeyer Johnson paraphrases this way:

> Trips to the Provolt store up-river were undertaken only at long intervals. Horsemen or drivers sighted on the trail would be eagerly accosted and asked to stop in for refreshments and the exchange of news—any news at all, we presume, whether of fresh mining strikes, the birth and death of a baby, the ignorant misfortunes of some greenhorn come in by sea, the antics of a drunk in the Illinois Valley—or the antics of a pack mule.

Bernard Murphy's DLC, along the lower Applegate opposite Murphy Creek, also became a "stopping place". By 1859, a hotel and saloon were in operation there.[42]

Further upstream, at the mouth of Thompson Creek, a stopping place was opened by Rial Benedict in 1854 on the former William Thompson DLC. In 1860, Orlando Rose settled near there, across the Applegate River, and erected a spacious two-story building with an upstairs dance hall. John and Marguerite Black tell us:

> Rose's Hall became famous for miles in every direction. Orlando helped organize the Bridge Point School District in 1872. He was postmaster of the Applegate Post Office in 1895 at which time the post office was in his home. Eventually his property was sold and the buildings removed.[43]

Other stores opened at mouth of Thompson Creek during the 1860s and 1870s. One of the most prominent was built of "hewed square logs" by William W. Pernoll, in 1874, on the north side of

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[40]Johnson, *Applegate*, p.9.

[41]Ibid., p.8.

[42]Ibid., pp.8-9.

[43]Black and Black, *Ruch*, p.154.

the Applegate River a couple miles west of Applegate Crossing. Pernoll "stocked a supply of basic grocery items, clothing, shoes, hardware, drugs and whiskey." Six miles up Thompson Creek, the Bingham brothers ran a stopping place on their adjoining ranches, where they raised feed for livestock.[44]

By 1860, travelers could count on finding shelter and food within a half day's journey at any point from Waldo to Jacksonville along the Jacksonville-Crescent City road. By 1870, general stores in the area were catering to the needs of an increasingly settled agricultural community.

Enterprises

By the early 1860s, many of these stopping places had blossomed into the enterprising centers around which the economic and social life of both the mining and the growing agricultural populations revolved. Two of these in the Middle Applegate were Logtown and Uniontown. (Ruch represents a later development, a more centrally located commercial center which would draw off the business of both Logtown and Uniontown and become the community center for its stretch of the river throughout the twentieth century.)

Logtown was an early stopping place in the Applegate that was in full swing by the time the stage road was completed in 1858. There, several saloons, a hotel, and a blacksmith's shop served not only travelers but the large mining population clustered on Forest and Poormans Creeks. Louis Herling opened a stopping place a mile east of Logtown in 1860. Here is how John and Marguerite Black tell it:

> A large house was built on the homestead, with a well dug in the front yard. Travelers began stopping there to water and rest their teams. Stages stopped there, too. Land was cleared on the hillside. An irrigation ditch to bring water from Poormans Creek was constructed. In a few years there were alfalfa fields as well as an apple orchard. Son Louis Herling was in business serving the traveling public. He was granted a liquor license in July 1866 for the fee of $15.00.[45]

A German farmer, Henry Bauten, bought the Herling place for $950 in an estate sale in 1882, applied for a liquor license, and opened for business.

> It is known by many old timers that Henry Bauten continued to sell liquor for many years. Drinks were to be had from the customer's own bottle as late as 1910. The term 'gallon house' meant that liquor could only be sold by the gallon under county license.[46]

Logtown was also the home of John McKee, who came to mine, but soon opened a blacksmith shop to serve the miners and farmers of the area. "He sharpened tools and plows, shod horses, mules and oxen," and invented his own miner's pick. Based in his log home, which was large enough for square dancing, the McKees functioned as informal social directors to the community, holding card games and sporting contests and other communal events every summer. Somehow, he and his wife Maryum also had time to raise a houseful of children. John and Marguerite put into a sentence the realities of life for so many of these early settlers: "There was a total of fourteen [children], but not all of them lived to adulthood."[47]

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[44]Ibid., pp.157, 154.
[45] Ibid., p.19.
[46]Ibid., pp.26, 19, 20.
[47]Ibid., pp.32-33.

Logtown died as gold mining declined during this period. Only a few buildings were still standing by 1900.[48]

Uniontown was located a couple miles south of present day Ruch on the Applegate River. The four Cameron brothers came from Iowa in the 1850s and, after mining on Sterling Creek, settled on homesteads along the Applegate River just downstream from its confluence with the Little Applegate and on the G. B. Davidson DLC on the Little Applegate River itself. Tod Cameron opened a store on their property, which they now called Uniontown. In time, a saloon and blacksmith shop were added. It was in their shop that an African American blacksmith known to locals as "Nigger Ben" worked, whose name was later given to one of the prominent mountain peaks in the region. The saloon-keeper, Val Comstock, hauled freight by mule team from Crescent City and mined on the side.

Tod Cameron also owned one of the earliest sawmills in the region, located at Wellsville about a mile up the Little Applegate River. John and Marguerite Black say "William and Robert operated the mill and sold lumber to miners and settlers for miles around. They drove team and wagon and delivered lumber to the mining camps when it was needed." In 1879, the enterprising Tod Cameron added a post office on the site, and became postmaster. But in the 1890s, Tod moved to Jacksonville, business declined when the post office closed, and the store also went out of business soon after. The Camerons went back to farming. During the 1860s and 1870s, William tended Tod's store and kept a diary which offers a glimpse of the texture of life on the Applegate. His first entry at the beginning of 1864:

> Spent the day shingling stable for Chappell...weather disagreeable...rained most all day...spent the evening reading, casting accounts...eating apples....

Of his wedding day, February 1, 1867:

> Got a team in town, went home, got Emma, went to Jackson[ville] and was married. Stayed overnight at Horn's.

John and Marguerite Black tell us the diaries recount many trips to Jacksonville for supplies, daily delivery trips to mining camps in Sterling, Buncom, Logtown and Jackass Creek, using a fish trap to catch the salmon that he sold to miners.[49]

Both Logtown and Uniontown were gone by the turn of the century. In this area of the Applegate, the future was represented by a town founded by Casper (Cap) Ruch, who built a blacksmith shop As a child, Ruch had come with his parents from Switzerland and settled on Humbug Creek to do some mining. His father had committed suicide when Cap was ten years old, a day after buying out his partner's share of their mining claim for $1,600 in gold coins. Neighbors said he had not been acting "right". Two weeks later, Cap's grief-stricken mother drowned herself and the youngest child, four-year-old William, in a mining reservoir some 50-by-60 yards, 5-to-6 feet deep. Cap lived under Peter Britt's guardianship, went to school, learned to be a blacksmith. He built a blacksmith shop where the Upper Applegate Road splits off from the Crescent City Road near the confluence of Forest Creek and the Applegate River. Soon he began to sell other food and supply items, added a post office (1897), then a new store building, smoke house, social hall and residence. Around the time of World War One, they added gas pumps. Cap Ruch died in 1930; his widow Anna ran the store until 1945, although the business declined rapidly after the community lost the post office in 1939.[50]

Lower down along the Applegate River, Murphy thrived early as a center of commercial and social activity. Walling mentions a grist mill, a saw mill and a post office, along with a way-station

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[48]Ibid., p.35.

[49]Ibid., p.59.

[50]Ibid., pp.44-51.

operated by James Wimer.[51] Both Williams (where Josephine County's first Grange was established in 1870) and Wilderville offered services for early settlers.[52]

Community institutions followed quickly the growth of enterprises. Public schools were established on Missouri Flat in 1854, at Logtown and Uniontown in 1863, at Sterlingville in 1865, at Thompson Creek in 1874, at Applegate Crossing in 1876, at Forest Creek in 1878, at Steamboat in 1889, at Squaw Creek in 1891, at Beaver Creek in 1897, and in the Little Applegate watershed in 1904.[53] Most of these were small, operated for three or four months, and attracted only a portion of the eligible students. The Uniontown School, for example, had thirty-seven students on the rolls in 1866, but the average daily attendance was only ten.[54]

The first Applegate area post office opened in 1858, when Oregon was still a territory and the only road a pack trail. Uniontown's and Sterlingville's post offices opened in 1879, Logtown's (on the old Herling place) in 1888, Provolt's in 1895, and Buncom's in 1896. Upriver, Palmer Creek had a post office (named Pursel) by 1898, Steamboat by 1888, and Watkins, near the mouth of Squaw Creek, by 1893.[55]

Churches seem to have become part of the landscape during this period as well. A Jacksonville newspaper reported Methodist, Episcopalian and Roman Catholic church services, and a new Methodist campmeeting at Heber's Grove, in 1869.[56] In 1870, the United Baptists held a "protracted meeting" on the Applegate near the mouth of Williams Creek.[57] Walling includes a lithograph of a Jacksonville Presbyterian Church in his 1882 history.[58] In 1890, a group of Methodists who had been meeting in the schoolhouse, built their church at the intersection of China Gulch and the main Applegate road.[59]

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[51] Walling, quoted in Hall, *Josephine County*, p.14.

[52] Hall, *Josephine*, p.15; Francis,*History*, p.61.

[53] Dunn, *Land in Common*, p.31; Black and Black, *Ruch*, pp.174-198.

[54] Black and Black, *Ruch*, p.180.

[55] Ibid., pp.108, 202, 204.

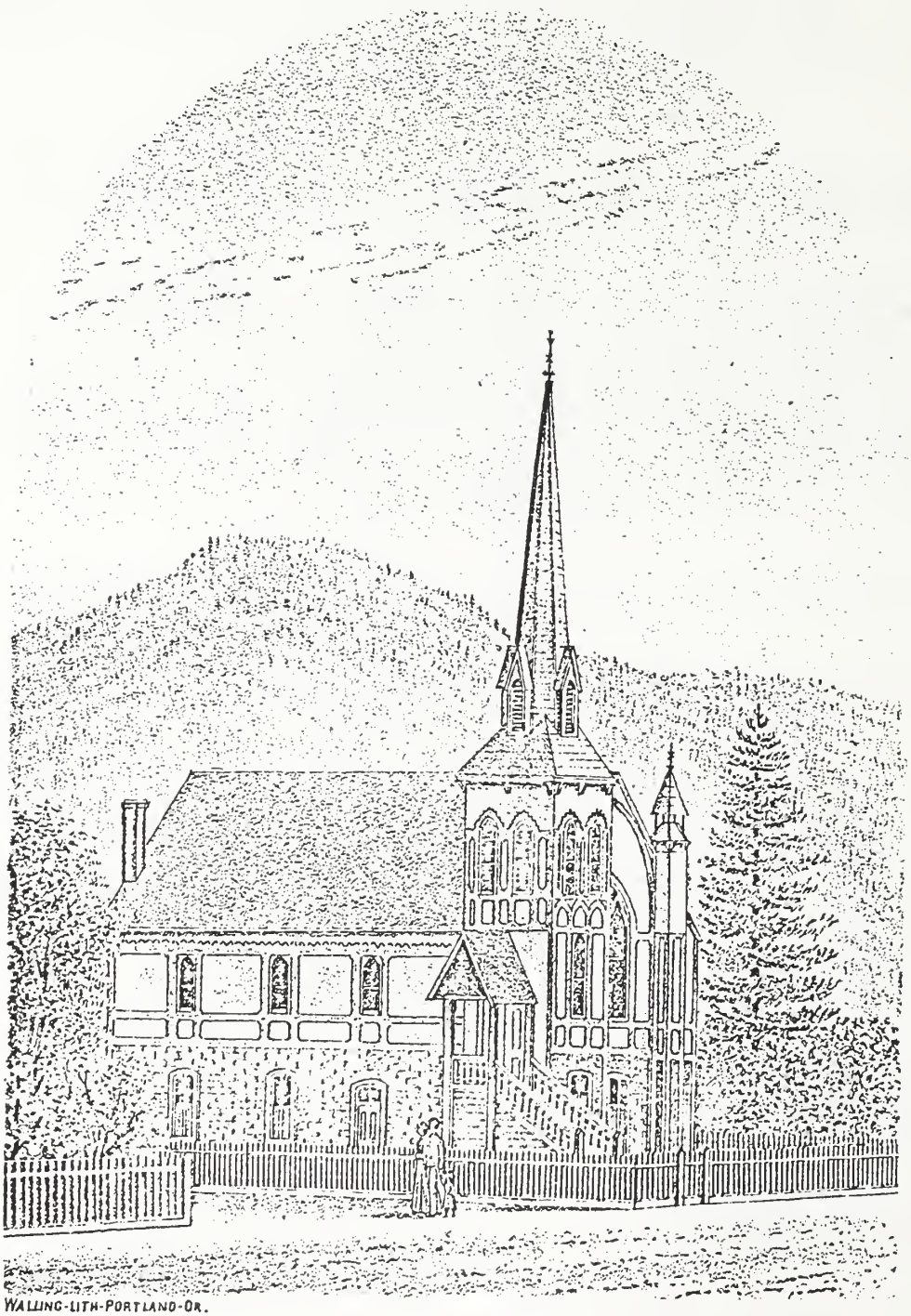
[56] Jacksonville *Democratic News*, August 14, 1869.

[57] Jacksonville *Democratic News*, September 10, 1870.

[58] Walling, *History*, p.320.

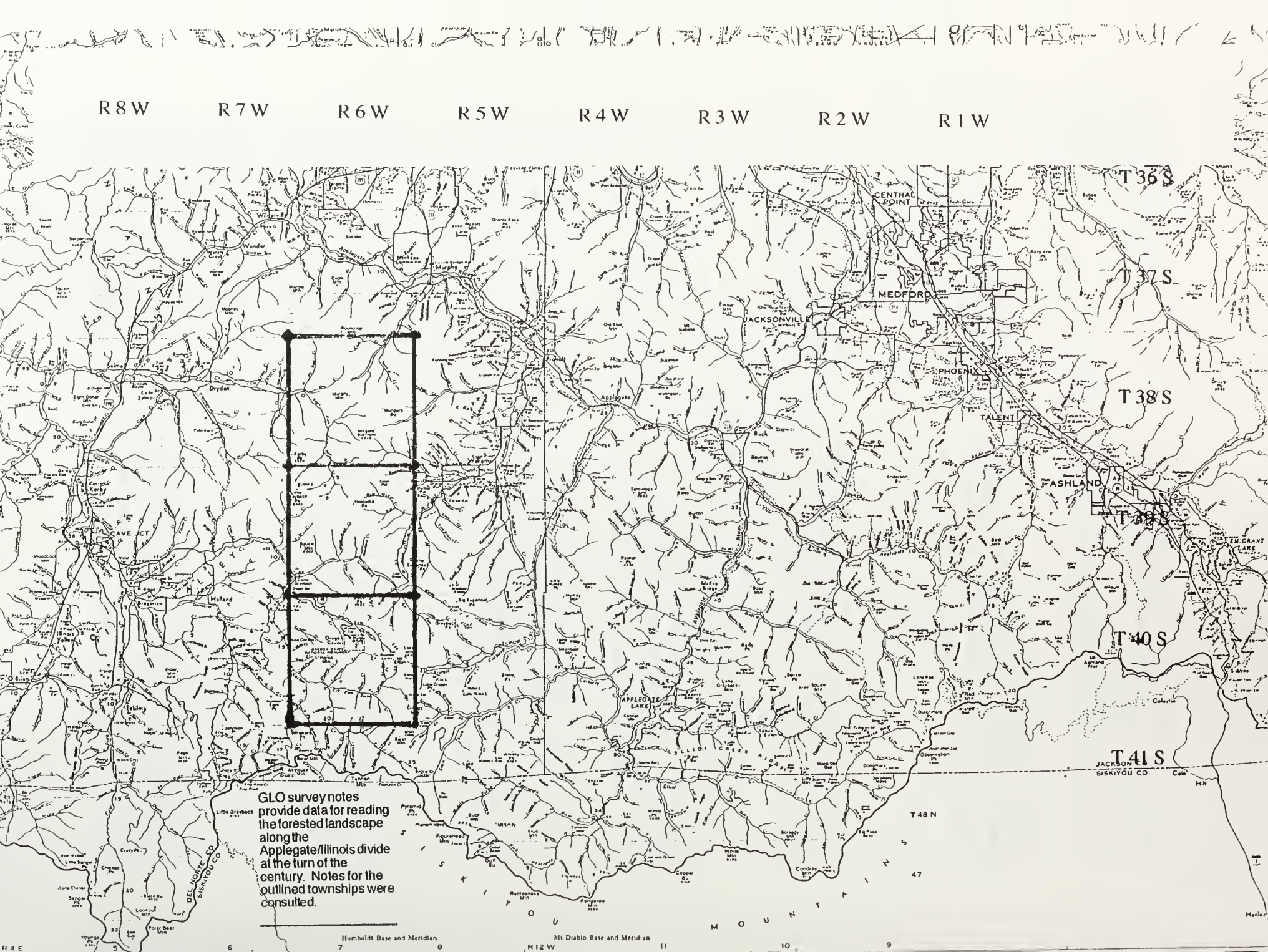
[59] Black and Black, *Ruch*, p.91.

Walling includes a lithograph of a Jacksonville Presbyterian Church in his 1882 *History of Southern Oregon.*



WALLING-LITH-PORTLAND-OR.

PRESBYTERIAN CHURCH, JACKSONVILLE.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PHOENIX
TALENT
ASHLAND
APPLEGATE LAKE
EM GRANT LAKE
Dryden
Applegate
Buck
Holland
Kerby
CAVE CT
DEL NORTE CO
SISKIYOU CO
JACKSON CO
SISKIYOU MOUNTAINS
GLO survey notes provide data for reading the forested landscape along the Applegate/Illinois divide at the turn of the century. Notes for the outlined townships were consulted.
Humboldt Base and Meridian
Mt Diablo Base and Meridian
R4E
R12W

Within five years of the removal of the natives, roads and centers of community activity were spread across all the sub-watersheds of the study area except the Upper Applegate Valley. By the close of this 1859-1895 era, however, the Upper Applegate Valley as well evidenced an influx of settlement activity, particularly near the mouth of Squaw Creek and up Carberry Creek in the Steamboat area.

Lives on the Land

The community stories we have been sampling represent a growing population dotting the countryside, particularly the well-watered valley floors from Uniontown downstream to Murphy and in the Deer Creek and upper Illinois drainages. John and Marguerite Black believe that "much of the best land in Oregon was settled and privately owned by 1890."[60] The Donation Land Claim Act had expired in 1855, after placing a good portion of the most accessible bottom land in the study area into private hands. But good land in the public domain was still available for purchase, at $2.50 per acre, and the Homestead Act of 1862 made 160-acre parcels available at a small fee to those who agreed to live on it and work it.

Most of these people farmed to meet their own needs and, in some cases, to provide a growing commercial market with agricultural products. An early example is Edwin Hinkle, an illiterate farmer who came to the Logtown vicinity from Tennessee in the 1850s. Hinkle cleared his fields and raised feed for the pack trains. He also ran his own pack-train to Crescent City, and operated a hotel and store on the side. The Hinkle family did not fare well in the new land. Edwin died in 1856, and his wife and daughters were killed when their house was burned to the ground by thieves in 1861.

When Edwin died in 1856, he left an estate that included an impressive inventory of the material life of an early Applegate Valley householder and farmer. As John and Marguerite Black list them, they include: household goods like tin ware, churn, wooden bucket, camp kettle, wash tub, feather bed, Oregon bed, rifles, shot gun, chairs and table, looking glass, shaving tools, saws and augers, iron wedge, hatchet, axes, mauls, hammer and chisel, hoes, candle molds; and farm equipment or livestock like an ox wagon, turning plows, scythe and cradle, horse cart, two sets of harness, saddle and bridle, a mule and a bay mare, sows and pigs, three dozen fowl, eleven cows and calves, five heifer yearlings, a yoke of oxen and a bull.[61]

James Dews homesteaded up the Applegate just south of the confluence with the Little Applegate in the 1870s. Nicholas Wright settled on 160 acres in Palmer Creek area before 1860. On the side, he ran a store and post office for miners and packers bound for Steamboat in the 1870s. Oscar Freeman Collings worked a homestead near the mouth of Squaw Creek in the 1870s.[62]

Killing

An early history of southern Oregon advertised the wonderful plethora of animals living on the land when the newcomers arrived. "Elk, black-tailed deer, and antelope, abound plentifully in this region of the country," along with a "small species of wolf" called the coyote, and black bears in abundance which, "being easily killed, affords the miners excellent food."[63] This latter comment

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[60]Ibid., p.122.

[61]Iid., p.29.

[62]Ibid., pp. 135, 136, 141.

[63]O'Donnell, *That Balance*, p.55.

implies what would have been a common understanding of the time and the primary attraction to this variety of living things: animals are there for the killing.

Living on the land, virtually anywhere in America during these years, included, as a matter of course, feeding off the wild animals that shared the land. Without game laws, hunting for meat was virtually constant and unregulated. The documentary records are dotted with rather matter-of-fact references to what today might be interpreted as mass slaughter. In 1869, four hunters spent about ten days in the Siskiyous and killed twenty-three deer and one elk.[64] Tallowbox Mountain got its name, so it was said, because in the 1880s a group of hunters killed more deer than they could carry out, so they put the tallow in a box up in a tree to keep it away from predators. In 1885, J. B. Griffin killed seven deer and three bears in half a day on Sterling Creek.[65]

It was Walling's opinion that by the 1880s, the once plentiful elk were "reduced in numbers to a few individuals who inhabit elevated and almost inaccessible spots in the mountains."[66] It is difficult to evaluate the accuracy of this judgment, and if it is accepted, to know whether the elk's decline had to do with the intensity of hunting or simply with the settlement and mining occurring in its former territory.

Another kind of killing seemed to enjoy popularity in the study area during the late nineteenth century. This was the taking of "wild animals" for something other than nourishment. Representative of this trend, though at a later date, Theodore Roosevelt gained notoriety, beginning in the latter part of the first decade of the twentieth century, for slaughtering huge numbers of game animals in Africa, not for meat but for the trophies they represented. If certain historical commentators are correct in seeing a nationwide crisis of masculinity in the waning years of the nineteenth century, brought on by the increasing subservience of working men to machines and desks, perhaps the taking of wild animals was a rearguard action to sustain more traditional male roles. The local variant of that may have emerged from the general awareness that frontier days, and their opportunities for male heroism, were drawing to a close. What better way to join the heroes of the early days than to become the great white hunter for a week or a week-end, bringing back more stories than you could carry carcasses, vicariously continuing the drive to push civilization forward in this threatening land.

Whatever the validity of these speculations, it is true that the wild animals of southern Oregon during this period were often described as threatening the lives and interests of the inhabitants, invoking fear as much as blood-lust. A comment by Lindsey Applegate's daughter, who spent a few of her childhood years living at the Siskiyou toll house, may represent this general unease with "wildness." She wrote that "the forests were swarming with wild animals, panther, wild cats, black, cinnamon and grizzly bear, and great gray timber wolves which would howl in a blood curdling way in the forest at dusk."[67] Organs of opinion at the time spelled out the threat much more explicitly. The historian who noted the rich abundance of elk, deer and antelope in Oregon warned that "the grizzly bear is a great annoyance to farmers, in killing and carrying off their stock."[68] "Coyotes are troublesome in some portions of the valley," reported an 1879 newspaper. "Some sheep raisers report losses and are taking steps toward ridding the country of these pests."[69] In 1870, a sixteen-year-old shepherd was found "terribly mutilated," probably by a bear.[70] Frank

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[64]Jacksonville *Democratic News*, August 21, 1869.

[65]Haines and Smith, *Gold*, p.62.

[66]Walling, *History*, p.445.

[67]Alice Applegate Sargent, "A Sketch of the Rogue River Valley and Southern Oregon History," *Quarterly of the Oregon Historical Society*, XXII (March, 1921), p.9.

[68]Armstrong, *Oregon*, p.55.

[69]Jacksonville *Democratic Times*, January 24, 1879.

[70]Jacksonville *Democratic News*, September 3, 1870.

Smith reported that bears had become "very troublesome" in the Applegate, "making sad havoc among the hogs."[71]

Taming the southern Oregon landscape, then, necessarily included killing or eradicating that which resisted or restricted human activity. Once Frank Smith set his mind to it, he killed thirteen bears within a few weeks.[72] One January day in 1868, Mr. McDonnogh of Jacksonville killed three panthers and a large bear.[73] In 1876, Samuel Mathis killed three bears at the mouth of the Applegate River "in a shorter time than it takes to tell about it."[74]

There is no indication that the extinction of the most troublesome species carried anything but full public approval. The most prominent casualty of hunting and fear was the grizzly bear. At the beginning of Euro-American settlement, Lindsay Applegate observed that "old bruin of the grizzly species is found in great numbers." When Walling compiled his history, a few decades later, he reported that the last grizzly bear seen west of the Cascade Mountains had been killed in 1877.[75]

The Business of Farming

In 1868, with the population in the Pacific Northwest expanding rapidly, the Oregon State Agricultural Society sent a list of questions to representatives in various regions of the state. The answers, they hoped, would be of interest to settlers, a lure for those back East. The editor of the Jacksonville Reveille published the letter and answered the questions.[76] This article offers a window on the self-understanding of southern Oregonians during this period.

The editor represented land for settlement in southern Oregon as of average cost. Unimproved lands were quite inexpensive, even for the times, at $1.50 per acre. Government lands were available as well, "for agricultural, mechanical or lumbering purposes." The tax rate was minimal, and the county treasury was full and growing. Soils and climate were thought to be ideal for agriculture, with grain crops "never failing", livestock raised "with little expense," and fruits and vegetables abounding. The climate was reported to benefit personal health as well. "The health of the county is proverbial."[77]

All the needs of immigrants were reported available at a fair price. One drawback listed was the absence of marketing facilities, showing the need for a railroad—by that time already under construction. All types of timber ("fir, cedar, white pine, oak, ash, etc.") available in the state were available in the region with "easy access, and in such quantities that building and fencing material could, if necessary, be supplied to the entire state." However, "no lumber is exported." Water supply was deemed excellent and "dispersed all over the county." A woolen mill, five flour mills, seven saw mills, a furniture factory, a window and door factory, a tannery, and a broom factory were the listed manufacturing resources.

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[71] Jacksonville *Democratic Times*, December 14, 1876.

[72] Jacksonville *Democratic Times*, December 14, 1876.

[73] Jacksonville *Reveille*, January 11, 1868.

[74] Jacksonville *Democratic Times*, August 31, 1876.

[75] Walling, *History*, pp.310, 180.

[76] Jacksonville *Reveille*, June 27, 1868.

[77] Despite regular diphtheria outbreaks, and six months after a devastating smallpox epidemic in Jacksonville in 1868, a local paper reported "the excellent health enjoyed, universally, by this community," and noted that "the superiority of our climate is beginning to be recognized by persons from abroad, and as a consequence, a number of farms have been sold this season, at fair prices, to immigrants who sought a residence in our midst, mainly for the health advantage of our climate." Jacksonville *Democratic News*, May 1, 1869.

The optimism expressed in this letter is characteristic of the ebullience which official spokespersons for the region demonstrated in the late nineteenth century. Regional boosterism was at its height. The Rogue Valley was heralded as "the Italy of Oregon."[78] Advertisements for southern Oregon were placed in newspapers on the East Coast, encouraging a new influx of the kinds of citizens calculated to bring stability and wealth to the region. If Edna May Hill is correct, the backbone of Josephine County's citizenry heeded the call: "Many of our most solid citizens came out during those years and stayed."[79] Newspaper editors took the opportunity to warn local citizens—especially the ones frequenting the saloons—that success would only come to those willing to do an honest day's work.

The late nineteenth century was an era of rapid change nationwide. Labor-saving inventions and mass-produced luxuries promised a new era of untold wealth and comfort. The national adrenaline was flowing at high tide, as if only the building of a new, urban, industrial society could cleanse the country of the bitter legacy of civil war. Prominent southern Oregon voices joined the chorus, but they put their own spin on it. Their fate was not industry, but agriculture. They would be as modern, as technologically efficient, as the rest of the country, but in the realm of agriculture, not industry. The future of the region, they avowed, lay in commercial farming.

The newspapers of the Rogue Valley were full of farming news in the 1860s and '70s. Some of it had to do with local curiosities. Mr. Dunlap grew a strawberry four-and-a-half inches around.[80] Mrs. Dunlap, not to be outdone, produced gooseberries measuring three inches around.[81] Excellent grapes and fulsome sweet potatoes were reported.[82] Succulent blackberries, tasting like raspberries, came from F. M. Smith's farm on the Applegate River.[83] Ripe strawberries and green peas were harvested remarkably early in the growing season, considering the latitude.[84]

Much of this reflects the "blessings of gentle nature" mythology that represented one side of Walling's vision, as well as a theme popular among such boosters as the editor of the Jacksonville Reveille, whose letter we described above. In that letter, and in much late nineteenth century discourse, the land was the major actor in the region's unfolding drama, and the land was kindly disposed toward humans. How inviting, how idyllic, to be in partnership with the land. An example of this mythology appeared in the center of the front page of the Jacksonville Democratic Times in 1869, in the form of a poem written by Mrs. J. E. Akers. Its title was "The Farmer."

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[78]Walling, *History*, p.318.

[79]Hill, *Josephine*, II, p. xvi.

[80]Jacksonville *Reveille*, June 6, 1868.

[81]Jacksonville *Reveille*, June 27, 1868

[82]Jacksonville *Democratic Times*, September 28, 1876.

[83]Jacksonville *Democratic Times*, September 14, 1876.

[84]Jacksonville *Democratic News*, May 8, 1869.

The Farmer

Who so joyous as the farmer,
When the merry Spring is come,
And the air is full of music
All round his rustic home?
Music of the noisy poultry,
Bleating lambs and lowing herds;
Towser romping with the children,
And the twittering of the birds.

Who so cherry as the farmer,
Gathering in his ripening sheaves
When the autumn winds are sighing
Softly 'mong the falling leaves?
All the gorgeous Indian Summer,
Whistling at his daily toil,
Who so happy at his labor,
As the man who tills the soil?[85]

Walling considered agricultural yields to be "beyond belief" to easterners, who were "strangers to the facile ways of the agriculturist of the Pacific slope."[86]

Thus did the boosters attempt to fill their valleys with enterprising citizens. Occasionally, one hears a dissenting voice. In 1869, a newspaper editor condemned promoters of immigration, accusing them of misleading the public. He claimed that most of the arable land was already taken, and although (due to the generosity of the Donation Land Claim Act) it was held in tracts larger than a single farmer could cultivate, property owners resisted breaking them into more practical sizes. So he urged immigrants not to expect an agricultural paradise in southern Oregon, and not to expect ready opportunities for employment. Bring capital with you, he suggested, and you can get into business or perhaps find a small homestead and enjoy modest success.[87] Ten years later, however, another editor described southern Oregon this way:

> Thousands of acres of land, rich as those of the valleys of the Nile, are still unscarred by the plow-share . . . and constitute a fund of limitless wealth for the industrious and frugal of all coming generations.[88]

Perhaps, in a relative sense, agriculture did seem a rosier prospect in southern Oregon than elsewhere. In a 1930 letter to the Medford Mail Tribune, E. E. Pelton remembered that in 1865 most of the valleys in southern Oregon were fenced and under cultivation. He offered this opinion:

> It requires very little labor to produce grain and vegetables compared with other states, there being no rain here in summer. The weeds do not grow, nor does the land require much cultivation.[89]

Pelton himself had been an early commercial farmer in the region. What he represented, and what the boosters really envisioned, of course, was not the self-sufficient farm family cavorting in their

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[85]Jacksonville *Democratic Times*, June 12, 1869

[86]Walling, *History*, p.317.

[87]Jacksonville *Democratic News*, August 7, 1869.

[88]Jacksonville *Democratic Times*, January 3, 1879.

[89]Medford *Mail Tribune*, November 6, 1930.

truck garden but the rise of commercial agriculture, into whose orbit most of the bottomlands in both the Applegate and Illinois drainages were drawn during this era. Wheat seems to have been the early crop of choice. In fact, in the 1880s, Walling suggested that agriculture's history in the region "is simply a history of wheat raising."[90] In 1868, a Jacksonville newspaper reported the arrival of twelve mowers and reapers and several threshing machines for purchase by local farmers. "This speaks of business on the farms," wrote the editor. [91] In 1870, the mining communities in Sailors' Diggings and Althouse were reportedly buying large quantities of flour.[92] In 1872, the wheat harvest in Oregon grew by 25%.[93] In 1876, J. Wimer and his son built a flour mill on Murphy Creek and advertised for "prime wheat."[94]

Increasingly, these commercial farmers would fall under the influence of forces over which they would have no control. As they did so, the romantic image of the farmer plucking the fruits of nature effortlessly would give way to harsher realities. Some of these realities would be natural. Late nineteenth-century newspapers dwell on the exigencies of the weather in southern Oregon, the inevitable and always seemingly surprising cycles of flood and drought. And then there were the grasshoppers. In 1853, for example, they invaded the fields in the Rogue Valley. "Grass, orchards, grain, gardens, vegetables, etc. are all eaten up and destroyed, and they have now commenced upon the oak trees," wrote one laconic observer.[95]

Some of the forces influencing commercial farmers were humanly stimulated or constructed, market decisions made by neighbors or those farther afield based on their own, and not the "common," good. Already in 1870, the Jacksonville newspaper reports that flour mills are cheating the farmers, "who are the mainstay and support of the country."[96] In 1879, another paper describes an insect that is destroying grainfields.[97] Even success hurt the farmer. By the early 1880s, the local wheat market seems to have been over-supplied, and the price of wheat fell.[98]

Edna May Hill, writing her Josephine County Historical Highlights in 1979, saw in hindsight what was somewhat blurred in the reports of southern Oregon's boosters:

> Many men who lived in the Rogue River Valley in its early days believed that some day the mines would be exhausted and the forest trees would be gone. Then this would be an agricultural land, and planning and promotion toward that end should be pushed. In an untried land, study and experimentation must be resorted to, else how can we know what the soil will grow, what the weather and the water supply will allow? It is interesting to read about what a struggle it was, how many disappointments there were, how many failures there had to be in order for the people to learn what their valley would do, what resources were available to them, which ways to turn for success, what kind of valley it was going to be.

She follows up with a 1909 article from the Grants Pass Courier which trumpets the merits of alfalfa, grain, potatoes, beets, carrots, onions, all of which "can secure a cash crop at all times in the local market" depending on "your enterprise, your ability and your knowledge of farming." Likewise, according to this article, for dairying, poultry and eggs—all of which "can be done on cheap land which can be purchased within a few miles of Grants Pass, one of the great mercantile

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[90]Walling, History, p.316.

[91]Jacksonville *Reveille*, June 27, 1868.

[92]Jacksonville *Democratic News*, August 20, 1879.

[93]Jacksonville *Democratic Review*, June 1, 1872.

[94]Jacksonville *Democratic Times*, August 24, 1876.

[95]Gilmore, *Rogue River Valley*, p.314.

[96]Jacksonville *Democratic News*, August 20, 1870.

[97]Jacksonville *Democratic Times*, April 11, 1879.

[98]Walling, *History*, p.345.

centers of Southern Oregon." The article admitted, however, that "the one great business...is the planting of orchards or vineyards."[99]

In fact, quite a few farmers began responding to fluctuating wheat prices before the turn of the century by shifting to different crops. An 1890s editorial observed: "Thousands of acres of wheat and grasslands are fast being converted into orchards."[100] In fact, the fruit business grew rapidly in the study area during this period. One sees references to grapes, peaches, apples, pears, plums and berries. The lower Applegate Valley seems to have been especially attractive to early fruit growers. Walling reported that A. H. Carson put in six thousand fruit trees on his Redlands farm on the Applegate River near Oscar Creek, probably in the early 1880s.[101] By 1905 Carson was also the largest grape grower in Oregon, with thirty-one acres of vines.[102] In 1876, the Jacksonville paper noted the new fruit dryer installed by the Alden Fruit Drying Company, paying fifty cents for a hundred pounds of good apples.[103]

A number of farmers shifted to raising sheep, hogs and cattle.[104] This brings us to another major environmental impact identifiable in this period: the growth of the livestock industry.

Soil and Its Discontents

In 1869, the editor of a newspaper in Jacksonville responded to a letter sent by David Jack, a Nebraska man who was considering a move to the Rogue Valley. Jack wanted information about what he would find. In the process of saying all the usual wonderful things that boosters tended to say in those days, the editor remarked that the local soil was "as fine as can be found anywhere in the United States," adding that what proportion of it isn't suitable for agriculture "is composed of grazing and mineral lands which are inexhaustible."[105]

Soil is the basic stuff. Strange that we should take it so for granted, even use it, as in "soiled," to describe what has been ruined. We trample it underfoot, assuming it will survive whatever onslaughts come its way. Two specific onslaughts were coming its way during the period in question. It was being both packed down and loosened up, in both cases, without a great deal of awareness regarding what was being lost.

Packing It Down

In 1883, George C. Culy arrived from California and bought six 20-acre mining claims on Steamboat (later Carberry) Creek. As the gold supply waned, Culy turned to ranching on his 120 acres. He built a house and barn near where the Chinese miners had camped and planted their apple orchard, and he and his wife, Permelia, raised a family of seven children. "The children attended Steamboat School and grew up on the ranch," John and Marguerite Black tell us. "The boys worked with their father farming and raising cattle. At one time George had 500 head of cattle and 30 head of horses on the surrounding ranges."[106]

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[99]quoted in Hill, *Josephine*, II, p.5.
[100]Medford *Mail*, March 3, 1892.
[101]Walling, *History*, p.458.
[102]Hill, *Josephine*, II, p.5.
[103]Jacksonville *Democratic Times*, September 28, 1876.
[104]Walling, *History*, p.345.
[105]Jacksonville *Democratic Times*, May 1, 1869.
[106]Black and Black, *Ruch*, pp.152-153.

Robert Cameron, brother to the enterprising Tod, ranched on the Davidson DLC beginning in the 1860s. John and Marguerite Black tell us that his son Frank "worked with his father on the ranch, raising cattle, which were pastured with other ranchers' cattle on the high ranges of the Siskiyou Mountains. They raised hay and grain and carried on general farming." The daughter, Clara Cameron, "rode with her father and brothers gathering cattle from the ranges every fall. She could handle a horse as well as any man." Clara Cameron later moved to Harney County, where she ranched on 20,000 acres around 1912.[107]

These are only two of the many ranching families who became established in the study area before the turn of the century. The local papers from the period include frequent references to the growing livestock business: a herd of five hundred cattle is being driven to Nevada, or a "large" herd of sheep sets out today for Lake County. LaLande tells us that during this period "livestock farming, encouraged by irrigation ditches built earlier, became the dominant economic use of the area."[108] LaLande writes specifically of the Little Applegate, but his characterization probably applies to the Middle and Upper Applegate generally as well as to parts of the Deer Creek drainage and the upper Illinois country. Walling saw it already in the 1880s, and wasn't surprised. "It needed no skilled prescience," he wrote, to determine that much of southern Oregon "was pre-eminently adapted to grazing, as on the hills and mountain slopes flourished uncounted acres of the richest and most succulent grasses upon which in summer, horses, cattle and sheep waxed obese and contented."[109]

Each spring, ranchers opened the gates and drove their cattle and sheep, and sometimes hogs as well, out into the open range. Over the course of the summer, their search for those "succulent grasses" would draw them toward ever-higher elevations. Then, in the fall, most of them would be rounded up and herded back into lower elevation, often irrigated, ranch fields for the winter.

Although it is difficult to determine the actual location and numbers of sheep and cattle grazing within the study area, county-wide assessor's figures offered by Walling do offer hints as to proportional changes during the period. He reports that, in Jackson County between 1862 and 1883, the number of cattle rose from 6,650 to 7,848, horses from 1,600 to 4,260, sheep from 1,328 to 31,501, and hogs from 5,000 to 13,235. During the same period, the human population rose from around 3,000 to just over 8,000, while the number of registered (male only) voters stayed virtually unchanged at just over 1,000.[110] This latter figure likely points to an increasing population of women and children—counted but not able to vote—in the county. This is consistent with the evidenced general trend toward agriculture and the growth of towns.

We can also advance a few speculations as to what these livestock figures might indicate for the Applegate watershed portion of the study area. Although there is evidence of commercial horse herds in the Rogue Valley (in 1869, a W. C. Myers drove a band of horses out of the valley to be shipped to the East Coast), we have no anecdotal evidence of this activity in the Applegate Valley.[111] On the other hand, cattle do seem to be mentioned prominently in the Applegate Valley during this period—more prominently, by far, than sheep.

Cattle ranching probably got its foothold in the Bear Creek and Upper Rogue portion of Jackson County earlier than in the Applegate area, whose economy was dominated by mining. This may mean that the rate of growth in numbers of cattle in the Applegate region outstripped the relatively modest rate of growth (approximately 20%) in the county as a whole. At the same time, the Bear Creek drainage would seem to have had significantly greater quantities of acreage in the pastureland favored by sheepherders than the Applegate drainage. Yet there are clear references to sheep in the Applegate Valley during this period. One of the Cameron brothers, J. R., was

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[107]Ibid., pp.64-66.

[108]LaLande, *Little Applegate*, p.14.

[109]Walling, *History*, p.316.

[110]Ibid., p.350.

[111] Jacksonville *Democratic News*, May 8, 1869.

reported to have paid a large sum of money in 1879 for a quantity of sheep.[112] We can estimate that the numbers of sheep in the Applegate area rose during the period, but its rise was probably not quite so precipitate as the more than 2,000% rise in the county as a whole.

The dramatic increase in the numbers of sheep present on the southern Oregon landscape during this period is partly explained by the fact that the geographic features and economic opportunities in the region were increasingly a matter of widespread public knowledge as a consequence of the gold strikes and statehood. In addition, there is some evidence that Oregon came to be perceived as more "sheep-friendly" than California. A Yreka newspaper reported that many California sheep herders were moving north into Oregon because "the sheep law in California is said to be too severe upon them to admit of their following the business in that state."[113] This didn't inspire enthusiasm in a Jacksonville newspaper editor, who worried that "our fine grazing lands east of us will soon be overrun with additional herds of sheep."[114]

Other commentators noted the general high quality of wool from the Rogue Valley area when compared to that of eastern Oregon, a competing large market. A Salem mill owner preferred it for "containing more oily or fatty matter, and hence requiring less oiling in the process of manufacturing." In addition, east-side wool was "thought to be not only drier but harsher - more dirty."[115] A sign of the vitality of the sheep industry during these years is the opening of the Rogue River Woolen Manufacturing Company in the 1860s. A local newspaper editor used the occasion to berate the local miners for buying their clothes in San Francisco when they could benefit the local economy by patronizing the local mill.[116]

Walling's report for Josephine County during this period shows far less of a shift from mining to livestock. In particular, the growth in numbers of sheep that characterized Jackson County is almost entirely absent in Josephine County. Figures are not available for 1862, but for the relatively short period from 1875 to 1883, Walling shows cattle increasing from about 1,000 to about 2,000; horses declining from 1,000 to 854; sheep declining dramatically from 6,000 to 2,700; and hogs rising slightly from 2,000 to 2,359. Between 1861 and 1875, the human population dropped from 1,400 to 1,132, and registered voters dropped from 724 to 331--no doubt showing a natural decline as the early mining boom ended. By 1880, the human population had risen sharply to 2,400. By 1883, Walling estimated a population of 3,000, with a recorded 547 voters.[117] The approximately five-to-one ratio of residents to voters, as compared to Jackson County's 1880 ratio of eight-to-one, highlights Josephine County's slower transition from the male-dominated occupation of mining to the more family-oriented agricultural pattern.

In several important respects, then, the demographic picture in Josephine County differs from that in Jackson County, although specifics for the study area are hard to come by in either case. Mining's fluctuations seem to have influenced Josephine County more heavily than they did Jackson County as a whole, where agriculture achieved an earlier position of dominance. However, the study area portion of Josephine County, the upper east side of the Illinois drainage, possessed the county seat and was the center of economic activity in Josephine County during most of this time. (Which may mean that the statistical portrait of Josephine County more nearly approximates the Illinois Valley study area than Jackson County's figures approximate the Applegate Valley study area.) In fact, since the Applegate Valley was marginal to the growth of Jackson County, we may want to infer that the Josephine County numbers offer, on the whole, a reliable guide to the Applegate Valley portion of Jackson County as well, where mining continued

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112Jacksonville *Democratic Times*, March 21, 1879.

113Jacksonville *Democratic News*, October 15, 1870.

114Jacksonville *Democratic News*, October 15, 1870.

115Mullan, "From Walla Walla," p.215.

116Jacksonville *Democratic News*, May 1, 1869.

117Walling, *History*, p.450.

to be important than it did, for example, in the more populous Bear Creek portion of Jackson County. We might then weigh carefully Walling's generalization that "farms are offered for sale in the Illinois Valley for one-half of the value they would command in the Rogue River Valley." This may not be a reliable comparison of farm prices in the Illinois and Applegate valleys.[118]

On the basis of these assumptions, we might estimate that in both parts of the study area, the shift from mining to agriculture was slower than in Jackson County as a whole. Perhaps the doubling in the number of cattle for Josephine County between 1875 and 1883 represents approximately the rate of change in both the Illinois and Applegate valleys. The slight rise in hog population in Josephine County between 1875 and 1883 mirrors that in Jackson County between 1876 and 1883 (from 11,768 to 13,235); its slightness, as compared, particularly, with the spectacular rise in Jackson County's hog population from 1862 to 1876, might be accounted for by the decreasing presence in the mining population of the Chinese, who seem to have provided a large part of the market for pork.[119] The comparative figures on horses and sheep, however, are puzzling. Why did the number of horses in Josephine County decline while Jackson County's horses doubled? (LaLande has suggested this is due to the arrival of threshing technology, which was more focused in the extensive wheatfields of the Rogue Valley.[120]) And why, particularly, did Josephine County's sheep count fall by over half when the Jackson County's rose by 2,000%? On the basis of this huge discrepancy, we can assume that the Applegate drainage saw a great deal more sheep grazing than did the Illinois drainage.

Atzet writes in 1982:

> Sheep grazing has been a major influence on the vegetation of the Klamath Province, particularly in the high elevations. Sheep grazed the Ashland Reserve from 1870 to at least 1924. In 1903, a typical year, 103,000 sheep and 7,500 cattle grazed along the backbone of the Siskiyou mountains between where Interstate 5 and U. S. Highway 199 are now located. By 1917 most meadows along the Siskiyou crest were 'badly depleted'.[121]

Most of the cattle and sheep grazing in the study area occurred "between 4,000 and 6,000 feet in elevation, along stream courses or at the edge of meadows."[122] This means that much of the grazing activity occurred in the transition zones, or ecotones, between plant communities. Such edge communities are species-rich, so the grazing activity of cattle and sheep brought them into direct contact with a broad spectrum of native flora. The impact on this flora was significant.

> Soil is the most critical ecosystem component. The interaction of soil and climate generate the inherent productivity of the site. Healthy soils are airy, permeable, fertile, (high organic content), protected from surface erosion, and productive. They transmit elements, and regulate water flow. Any damage to the physical or chemical properties, particularly the organic components of soil, has potentially extensive impacts on vegetation, water, nutrition, and microsite temperatures."[123]

In altering the "organic components", grazing has "extensive impacts". Currently, studies are showing that in addition to this organic impact, there is significant impact upon soils by grazing due to compaction. Soil compaction undermines every characteristic of healthy soils. Compacted soils are less "airy, permeable, fertile, protected from erosion, and productive" than non-

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118 Ibid., p.451.

119 Jacksonville *Democratic Times*, October 5, 1876.

120 LaLande, personal communication.

121 Thomas Atzet and David Wheeler, "Historical and Ecological Perspectives on Fire Activity in the Klamath Geological Province of the Rogue River and Siskiyou National Forests," USDA, 1982, p.5.

122 LaLande, *Outlook*, p.28.

123 *Applegate Watershed Assessment*, p.2.

compacted soils. Soil compaction may well represent the greatest environmental legacy of grazing, its impact extending beyond that of the immediate alteration of the flora during the era of grazing's heaviest activity up to the present.

Loosening It Up: Boosting the Mines

Hard-headed southern Oregonians in the late nineteenth century seemed to understand that the long-term stability and prosperity of their region depended on the steady habits of the agriculturist. But it had been the addictive imagination for vast mineral wealth lying in or under the soil that had brought the founders of a new, Euro-American society to these valleys in the first place. That imagination died hard. After all, until every ounce of dirt is overturned, who can say that vast wealth does not lie silently in some distant gulches, or some remote slope, of the Siskiyou Mountains?

The boosters and self-appointed prophets who told the story of the region in the late nineteenth century, then, reflected the seductive spell of mining, the metaphor that gave birth to the region. Walling is representative. Underneath this soil, he wrote, lie "gold, silver, copper, iron, lead, salt, coal and limestone, besides granite, sandstone and other rocks suitable for building purposes."[124] What is keeping us from hauling it out of there? Well, we don't know exactly where it is. Walling bemoaned the unwillingness of the U. S. Congress to appropriate money for a survey of the minerals in Oregon. But somehow, he knew they were there, and he knew they represented great prosperity for the region. "The great stores of useful minerals which certainly exist in Southern Oregon are suffered to lie dormant," he wrote, "awaiting the touch of the mighty magicians of the future, whose knowledge, skill and enterprise shall exceed ours as we exceed our ignorant ancestors."[125]

The Persistence of Gold

The one mineral whose characteristics had already been well charted, however, was gold. The glitter of gold continued to attract both the labor and the capital of southern Oregonians, and others further afield, during the late nineteenth century. New energy and new technology combined to open new areas as well as to re-work gravel that had already been sifted through by previous fortune-seekers. By the turn of the century, a local history observed that the gravel in the Althouse and Sucker Creek areas, for example, had been "worked over again and again." [126] Mining camps sprang up and died out, mining towns waxed and waned. The quest for gold sustained a small but persistent component of the local economies, men like John McDonnell and Frank Logg, "bachelor miners" who spent their winters moiling in the creeks of the Applegate, then left for San Francisco to "live it up" during the dry summer months, returning to their diggings in the fall, "broke but happy."[127]

In the late 1850s, the Williams Valley sub-basin of the Applegate watershed caught up with the rest of the region, experiencing rich gold strikes that drew a rush of miners and gave rise to the mining town of Williamsburg. Much of the soil that covered the alluvial flats was turned over, washed into sluice boxes, and deposited elsewhere.

At the mouth of Sterling Creek, on the Little Applegate, Buncom was organized as a mining district in 1867. "Mining claims were held by whites who leased them to Chinese mining companies. The

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[124]Walling, *History*, p.321.

[125]Ibid., p.343.

[126]*Mining in Josephine County*, p. 8.

[127]Black and Black, p.

Chinese were experienced miners...They did hard work and paid royalties to the owners. The Chinese lived together in a camp of tents and shacks near this site." Jacob Parks lived on a homestead just north of this "town," and served as Buncom's postmaster after 1896. Today, one can only find a couple shacks that may have housed the a cookhouse, a store that doubled as post office until it closed in 1917.[128]

Steamboat (now Carberry) Creek was heavily worked in the 1860s and 1870s. A Jacksonville newspaper reported in 1870 that prospects were good at "Steamboat City," where $1,200 in gold had been quickly recovered and more would follow if enough water could be found.[129]

Although the "bachelor miners" and other lone moilers continued to work the study area's streams during this period, the most easily accessible gold was long gone by the 1860s. Quantities of gold remained, but they awaited the arrival of a new technology from California, and the accompanying vision of the few entrepreneurs who could bring the larger pools of capital required to exploit it.

Investing Money, Blasting Dirt

Hydraulic mining originated in the California goldfields in the 1850s. It called for the constructing of ditches and flumes to deliver distant water to an onsite hose and nozzle capable of directing large amounts of water at high pressure onto compacted deposits. The pressurized water tore these deposits loose and washed the sediments into sluices. There the gold could be separated out, often with the use of mercury- or "quicksilver"- coated riffles. Riffles were small grooves or ridges built into the sluices to trap the gold or mercury/gold amalgamate. When a sufficient amount of gold lay in the riffles, the water was shut off and the "clean-up" commenced to gather the gold.

LaLande draws on deGroot's late nineteenth-century study to report that "the average hydraulic mining ditch had a drop of ten-twelve feet to the mile and a capacity of between 600 and 4,000 miner's inches (1 miner's inch = c. nine gallons per minute).[130] Such a drop and capacity, when channeled through hose and a iron nozzle, usually called a "giant", could produce hundreds of pounds per-square-inch of pressure. At the Sterling Mine in 1876, 2,000 miner's inches of water allowed two working "giants" to displace 800 cubic yards per day.[131] At 200 pans per cubic yard, this converts to approximately 160,000 pans per day. A legion of lone miners could not equal this level of production, as these numbers signify the dramatic impact this new technology had on mining.

The increasing scale of successful (and sometimes unsuccessful) mining represented by this technology of course implied larger scale financial structures. "Ditch construction, purchases of land and mining equipment, and maintenance of work-camps represented heavy capital investment by a small number of relatively affluent entrepreneurs, who typically resided in Jacksonville, Portland, or elsewhere."[132] Thus, speculation and major capital investment appear to be significant new components of this era of mining. Spence reports a good deal of British and eastern capital invested in southwest Oregon mines from 1860 to 1900--much more, he thinks than available records show.[133]

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[128]Ibid., pp.92-94

[129]Jacksonville *Democratic News*, September 3, 1870.

[130]LaLande, *Sojourners in the Oregon Siskiyous: Adaptation and Acculturation of the Chinese Miners in the Applegate Valley, ca. 1855-1900*, Thesis, Oregon State University, 1981, p.316.

[131]Haines and Smith, *Gold*, p.81.

[132]LaLande, *Little Applegate*, p.14.

[133]Clark G. Spence, "British Investment and Oregon Mining, 1860-1900," *Oregon Historical Quarterly*, LVIII (March-December, 1957), pp.101-112.

James Sterling's story—again—is illustrative; this time of the speculative possibilities of mining in the region. After his unhappy exit from the gold strike and the creek named in his honor, he developed the Hungry Creek Mine on the other side of the Siskiyous. In 1900, he sold it to a speculator named Fore for $17,000. In a "typical transaction", Fore turned around and resold the mine to a group of investors from West Virginia for $42,000.[134]

The Sterling Creek mines, which their discoverer left behind, also illustrate the heightened scale and speculative nature of mining activity in the Applegate region during this period and later. After the easiest gold was exhausted during the 1850s, further activity depended on the delivery of water. A number of ditching projects failed before the Gallagher brothers brought in a steady flow through a four-mile ditch from the Little Applegate River in 1860. (Later, this ditch supplied irrigation water to local farmers.) Then, in the 1870s, the former governor of Idaho, David P. Thompson, organized a project to bring Little Applegate water in a 23-mile contour ditch to upper Sterling Creek. The mines, already heavily worked over, paid well, which pleased the Thompson group. Their goal was to develop the site, then seek a buyer. The plan paid.

A wealthy Portland businessman, A. P. Ankeny, bought the Sterling Mining Company in 1879. The Ankeny family operated the mine for twenty-five years, succeeded by a series of speculators, then Jackson County (who took it over for back taxes), then the Yarra Engineering Company from New Jersey. In the 1930s, the Quercus Corporation came in with high hopes and plenty of heavy machinery, but without sustained success. Other owners followed. John and Marguerite Black tell us that many rural residences now occupy the Sterling mine site. "The mine tailings are overgrown with trees and brush but they are still there. Portions of the famous Sterling Ditch bank have been recently developed into a hiking and horseback trail by the Bureau of Land Management."[135]

The history of mining during this period, then, tends to be the story of companies as often as it heralds the exploits of individuals. An example is the Deep Gravel Mine, a mile northwest of Waldo, concentrated in Butcher Gulch. Two- and four-mile ditches brought water from the Illinois River, aided by 3,000 feet of flume and 8,000 feet of pipe (11" to 60" diameter), and a 7,000-foot tailrace disposed of the tailings. The gravel they worked was between twelve and sixty feet deep, "and is reported to have paid from the grass roots to bedrock."[136]

An equally impressive feat of mining engineering was the set of drainage tunnels blasted through the ridge dividing Althouse Creek from Democrat Gulch in the 1860s and 70s. One of these was 1,200 feet long, and drained the Althouse through to the other side. A second tunnel tapped into Althouse Creek higher up.

> This was completed after ten years work, occupying a force averaging five men for that time. The tunnel is six by seven feet and contains a flume four by four feet, through which passes the water of Althouse Creek. The object of draining certain mining ground on the creek was not fully attained, as the tunnel is above the bedrock of the stream.[137]

Another example of mining's increasing scale, this one in the Applegate Valley, was the Oscar Creek Consolidated Mining Company which, at the turn of the century, owned "250 acres on Oscar creek through which a very rich channel courses north and south for a distance of 10,000 or 12,000 feet." According to a Grants Pass account at the time:

> the mine was at first worked by ground sluicing, later by a small hydraulic plant. The gravel averages ten feet deep and will yield from fifty cents to one dollar per cubic yard, and occasionally a nugget worth from $100 to $300 dollars is picked up from the bed rock,

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[134]Haines and Smith, *Gold*, p.12.

[135]Black and Black, *Ruch*, pp.94-98.

[136]Francis, *History*, p.11.

[137]quoted in Hill, *Josephine*, II, pp.11-12.

which will make the average for the season's run go much higher in value than that shown in pan tests.[138]

One of mining's most successful investors was Jack Layton, who owned two hydraulic mines in Williams Valley during this period. One of them was a one-giant mine on an 80-acre claim in Bamboo Gulch that drew water from an elaborate system of ditches and flumes tapping into Williams Creek. With a crew of fifty men wielding picks and shovels, earning fifty dollars a month plus board, Layton built his thirteen-mile ditch in 1858 and 1859. The ditch fed a large reservoir from which Layton could distribute water to various mining locations. Layton later built an even more impressive ditch and pipeline (still operated as late as the 1940s) to bring Williams Creek water across the divide to feed his hydraulic "giants" in Ferris Gulch.[139]

The Spread of Hydraulics

Hydraulic mining activity occurred throughout the study area in the late nineteenth century. It is difficult to plot hydraulic activity definitively across the study area, especially that conducted by smaller operations in shifting venues leaving little record of their activity. However, the known extent of activity allows the conclusion that "almost all placer deposits on the tributaries of the Rogue and Applegate systems were worked by hydraulic methods at one time or another."[140]

We know, for example that in the Applegate drainage, hydraulic activity occurred on Carberry Creek, where Nickell and Nelson worked; on O'Brien Creek (named for John O'Brien, who tapped into it with a 13-mile ditch later diverted for irrigation purposes on Thompson Creek[141]); and along the lower Sturgis Fork. There was also documented activity above and below Browntown on Steve Fork; on Dutch Creek; on Squaw Creek below the Lakes; on Beaver Creek; on China Gulch; on Bamboo and Ferris Gulches, where Jack Layton worked; and on Oscar Creek and Palmer Creek where Robb, Kahler and Co. worked. Further activity occurred on Flumet Gulch and Star Gulch; on numerous high terraces along the Applegate, and along the lower Little Applegate, where Gin Lin covered four miles of the stream. On Sterling Creek, one of the largest mines in the west attracted tourists all the way from Portland.

In the Illinois Valley, hydraulic mining occurred at Indian Hill and French Flat and in the drainages around Waldo and Takilma, where some thirty-two miles of ditches and flumes at four layers of elevation allowed work to continue; on Althouse and Sucker Creeks; and on Canyon and Josephine Creeks (where, at the turn of the century, Samuel Bowden mined in gravel thirty to forty feet deep, and George Anderson of Kerby and W. P. Wilson of Los Angeles had for ten years brought in large profits—"and it still has many years of work to be done before its hundreds of acres of auriferous gravel shall have been exhausted," wrote a turn of the century enthusiast.)[142]

Walling tells us that "the extent of the mining activity in Jackson County is shown by the fact that 5,438 mining locations were made from October 8, 1856, to June 30, 1880. Of these sixteen were copper, one tin, 124 cinnabar, and the rest gold and silver. There were 1221 conveyances of mining claims and 133 transfers of water ditches and rights during the same time."[143] The numbers of claims offers an impression of the scale of mining activity in the Applegate country: Big Applegate District, 466; Little Applegate, 39; Uniontown, 2; Sterling, 151; Jackass, 491; Steamboat, 45.

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138 *Mining in Josephine County Oregon*, Grants Pass Commercial Club, 1907, p. 19.

139 Francis, *History*, pp.11, 61.

140 Follansbee and Pollock, p.170.

141 Black and Black, *Ruch*, p.152.

142 *Mining in Josephine County*, pp.8-10.

143 Walling, *History*, p.325.

Most of these major locations eventually experienced several passes of hydraulic activity as a steady stream of investors poured money into improvements.

Mining in Decline

The initial mining boom, to which boosters loved to hark back and with which they fueled their visions of future grandeur, had been a flash in the pan. Its best years were its first few years, when miners alone, in pairs, or in small groups scurried up and down the gulches of the Siskiyous, knowing that the very next time they bent the knee to dip up a pan of watery gravel might be the moment they'd strike it rich. In a few years' time, the gold-bearing streams were identified and the easiest gold was taken. Gold mining had reached the point of diminishing returns, when the labor required to make money had surpassed the money being made.

So by the 1860s, it was common knowledge that placer mining was in decline. Extensive sluice-building, hydraulic development, and "drifting" (tunneling into hillside deposits) were beyond the logistical and capital means of most miners. The latter method was not only more dangerous and capital intensive, but it still required a water supply. At the same time, news flashes of strikes in distant areas drew off the more adventurous of the mining population. Miners, frustrated with the lack of water and the poor results of their work, left the Applegate and Illinois study area for the gold rushes of northern and southern Idaho, and then for the incredible booms at Virginia City and Bannock City in Montana.

Sterlingville itself, one of the area's truest "boom towns," showed an 1860 census of only 123 men, women and children. There, miners had begun to "drift" into deposits beneath the town itself—a step that often "marked the final stage in the life of a mining town before it became a ghost town,"[144] even though Sterlingville would remain a viable community for some time to come.

Also contributing to the mining depression was a Civil War-related decline in demand for gold. The Oregon Sentinel reported in May of 1861 that, "gold was hard to sell due to unsettled conditions in the east which made gold shipments difficult."[145] This reminds us that from the start, resource extraction in the region was dependent on larger, distant political and economic realities.

According to Walling, gold production decreased each year after 1856, presumable until he wrote in the early 1880s.[146] Merriam identifies 1855 as the peak year.[147] The 1860 census put Jackson County's population at 3736 and Josephine County's at 1,623. A sizable number of these were by now farmers and ranchers, replacing the thousands of miners present only a few years previously.[148] By 1870, Jackson County's population stood at 4,759 and Josephine County's had continued its decline to 1,204. (Most of the Jackson County population was, of course, in the Rogue Valley proper, not in the Applegate Valley portion of the study area; most of the Josephine County population, on the other hand, was within the study area.) So while the hydraulic era breathed new life into the gold mining economy, it didn't resuscitate the patient to its former centrality in the economy of southern Oregon. In Walling's words, "agriculture, at first carried on

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144Haines and Smith, Gold, p.30.

145Gilmore, *Rogue River Valley*, p.94.

146Walling, History, p.325.

147Willis B. Merriam, "Notes on Historical Geography of Rogue River Valley," *Oregon Historical Quarterly*, XLII (March-December, 1941), p.320.

148William Pierce Tucker, "Social History of Jackson County," *Oregon Historical Quarterly*, XXXIII (March-December, 1923), p.311.

but to supply miners with the necessities of life, becomes paramount and is destined to so remain."[149]

Josephine County seems to have been especially hard hit. It was Walling's opinion, in 1884, that

> the [Illinois Valley] fell gradually into decay with the decrease of mining and at a faster rate than any other section of the country. In 1865, Althouse was said to have 'nearly winked out,' and was compared to Goldsmith's Deserted Village, as to its air of deserted loneliness. Since that time the process of decay has continued, and in spite of many attempts to revive it, the locality contains little to show but the remains of its former activity and importance. Browntown, Hogtown and Frenchtown are known only by their names, and nothing is left of them but the indestructible refuse of mining camps, the tin cans, the culinary vessels and the rough stone chimneys of miners cabins.[150]

Bustling Waldo was a sleepy hamlet by the turn of the century. A Josephine County historian tells us that things were never the same after the Chinese left during the last two decades of the century, many of them to work on railroad construction crews. Possibly their departure accounts for the stagnation in the hog market. But they weren't the only ones. According to this same historian's report, "hardly anybody stayed."[151]

Addendum: Ethnicity, Entitlement, and the Land

It is possible that the mining era, particularly the first several decades, brought together the most ethnically diverse population southern Oregon has ever seen. LaLande has noted that "French-Canadians, Hawaiians, Chinese, Mexicans, 'Yankees' and Europeans" all combed the drainages of the study area in their search for gold.[152] To this list might be added Native Americans and African Americans, although not without some irony. Sterling and Haines speak of the "Kanakas"—Hawaiians who first arrived in the Pacific Northwest as fur traders, and then joined the gold rush to California and Oregon. Jacksonville had its Kanaka Flats and there were several Kanaka Gulches in the mining districts. Sterlingville had six of them in 1860 but all of them had moved on by the time the next census taker arrived in 1870.[153]

When white Americans—whites of many nationalities—arrived in southern Oregon, they seem to have brought with them a sense of entitlement. Woody Guthrie wouldn't write "This Land Is Your Land, This Land Is My Land" for many decades yet, but the emphasis for most Euro-American newcomers to southern Oregon was on the "my land," with allowances made for the "your land" if the you happened to be a fellow Euro-American. That's about as far as the privileges of mutual sociability could be stretched in the opportunistic minds of the early migrants.

Haines and Smith, in their chronicle of the gold rush on Sterling Creek, offer a simple factual statement that embodies widely shared assumptions about entitlement in this new land. They say that "evidence of the decline of the [Sterlingville] district as a placer mining camp is to be found in the presence of Chinese and Kanaka mining claims. The presence of the Chinese is an inevitable sign of decline for the miners would never permit them to mine until the number of vacant claims

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[149]Walling, History, p.350.

[150]quoted in Hill, *Josephine*, II, pp.11-12.

[151]Francis,*History*, p.60.

[152]LaLande, *Outlook*, p.16.

[153]Haines and Smith, Gold, pp.35-6.

reached a significant number."[154] There seems to have been no doubt as to the ethnic identity, on this frontier, of permittor and permittee.

The Chinese were widely known for their successes in re-working the tailings of worked-over claims formerly held by whites. This tendency could be attributed to a general fastidiousness not exhibited by other groups, but it was doubtless encouraged by a desire to escape the wrath of the white majority by avoiding direct competition. It may well be that their capacity for hard work was the very trait that disqualified them for equality among Euro-Americans who, in other contexts, professed an almost religious reverence for hard work.

When economic reality failed to shape itself to the inflated hopes of the local boosters, the more mean-spirited of them often turned to a search for scapegoats to explain the demise of mining's golden era. Chinese immigrants proved a ready target. A consistent theme in the pages of the early Democratic News of Jacksonville was an incitement to fear "The Influx Of Asiatics."

> Do you relish the idea of competing with such a horde of 'docile, obedient and industrious' slaves, who, you are promised, will shortly rule the labor markets.[155]

Such sentiments prompted the regular ill-treatment of the Chinese. A traveler in 1862 noted "the ubiquitous Chinaman, moving from mining locality to mining locality, fleeing from the kicks of one to the cuffs of the other, with no fixed abiding place to be called his permanent home."[156] Often, the abuse went beyond kicks and cuffs. LaLande culled these headlines from the Oregon Sentinel:

1876 Four Chinese companies robbed of their gold
1877 Chinese cabin burned
1877 Another Chinaman assassinated
1877 Discharged-murderers of Chinaman go free
1878 Chinese cabin on Jackson Creek burned
1880 Windows of Chinese dwelling smashed Christmas eve [157]

Some mining districts, including Jackass, Poormans and Humbug, forbade Chinese to own claims. Other mining companies, however, including those on Sterling Creek and Squaw Creek, found Chinese laborers useful in the construction of extensive ditches and flumes. The Foreign Miner's Tax, passed in 1859, required a two-dollar per month tribute from each Chinese and Hawaiian miner. According to local wisdom, however, the "wily strangers found ample means to evade it."[158] This tax, borrowed from California's experience, produced an income of $2,650 on collection expenses of $1,309 for Jackson County in 1869.[159] Whether or not it was true that these taxes could be evaded, the Chinese were not able to avoid the Chinese Exclusion Act, passed by the United States Congress in 1882. This anti-immigration act, the political brainchild of Western congressmen, all but terminated Chinese immigration into the U.S.

> In summary, the Chinese social experience in nineteenth century America was usually far from a pleasant one. Exploited by countrymen and foreigners alike, subjected to verbal, legal and physical abuse by the 'host' population, the Chinese sojourner generally lived a marginal existence on the fringes of American frontier society.[160]

154Ibid., p.35.

155Jacksonville *Democratic News*, May 1, 1869.

156Mullan, "From Walla Walla," p.219.

157LaLande, *Sojourners*, p.40.

158Walling, *History*, p.345.

159Jacksonville *Democratic News*, August 21, 1869.

160LaLande, *Sojourners*, p.44.

It is not at all clear, of course, that the presence of Chinese laborers contributed markedly to the decline of gold mining. Their tendency to rework abandoned claims and avoid conflict by keeping to themselves seems to point to ethnic, not economic, reasons for their mistreatment. Although it is true that they often took the fruits of their labor back to China, they didn't differ in this respect from the many other transient miners who returned with their profits to California, the Willamette or Ohio. Further, during their sojourn in the region, the Chinese brought their trade to the local businesses. Kaspar Kubli's store on Missouri Flat, for example, was a major beneficiary of Chinese purchasing.[161]

It may not be possible to show direct links between the treatment of the Chinese and the treatment of the landscape by the Euro-Americans who made southern Oregon their home. We might wonder, however, at the ease with which these newcomers from the East came to feel a sense of ownership over a land to which no one had given them title, and could so quickly express that ownership by excluding people whose work habits, had they come in different hued packages, would have qualified them as "one of us."

The question to ponder, perhaps, is what an "ownership" or "entitlement" so easily assumed might have implied to the white settlers of the Applegate and Illinois Valleys. Native peoples did not share the presumptions and legalisms of "ownership," nor did they assume that "entitlement" came with a certain color skin. Their land management practices seem to have grown out of a sense not of ownership but of obligation and mutuality. It's hard to imagine these very different Native understandings of the relationships between land and humans giving rise to the invention of hydraulic "giants" that could blast away in a single afternoon fragile soils constructed ever so slowly over countless centuries.

The Look of the Land

Water Stories

Without question, the new hydraulic technologies proved a boon to enterprising people capable of generating sufficient capital to install and utilize them. But they also extracted a far heavier toll on riparian environments and agricultural operations than had the primitive panning and sluicing technologies.

The impact on riparian environments, however, was not widely recognized at the time. What was recognized in southern Oregon from fairly early on was the finitude of the water supply, especially the supply delivered by ditch during the drier seasons. In March of 1861, an editorial controversy raged in the pages of the Oregon Sentinel. The battle was over water rights: who should have primary access to limited water supplies—miners or farmers? The paper's editor argued that miners possessed the more worthy claim to water, because the gold supply was inexhaustible, and thus represented the region's future. He cited a recent letter to the editor which claimed that farmers,

> shut their eyes to their best interests, and to their own future prosperity, whenever they decline to aid miners to the full extent of their abilities in any undertaking which will furnish a plentiful supply of water to the miners during the whole year round.[162]

Supporting this perspective with an "if only . . ." tone of voice, the Alta California reported,

> For it is a truth, that if water were reasonably plenty, gold mining would . . . far outstrip all the agricultural resources of the country, great as they are.[163]

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[161]Ibid., p.27.

[162]Gilmore, *Rogue River Valley*, p.92.

[163]*Daily Alta California*, December 13, 1860.

In California by this time, however, mining's impact on both the quantity and the quality of water available to farmers was well recognized. Hydraulic operations in California's Sierra foothills spread siltation and flooding throughout the lower Sacramento basin. Farmers went to court to defend themselves and preserve their livelihoods. The counter-claims of farmers and miners were contested in California courtrooms throughout the 1870s. In fact, there is evidence that the uncertainties of these proceedings caused jittery capitalists to look northward, toward Oregon. From the perspective of capital interest, this move proved prescient, as the Ninth Circuit Court found in favor of the farmers and brought Sierra hydraulic activity to a close in 1884. LaLande has recognized this and notes that,

> large-scale hydraulic mining investments in the Klamath and Rogue River drainages did not become common until after California legal suits had begun to plague hydraulic mining operations in the Sierras.[164]

The Rogue and Klamath drainages were not "navigable," a primary basis for the court ruling against mining in California, and therefore, were perceived to be free from the California precedent. Competition between farmers and miners in our study area, then, shaped itself in terms of the competition for water supply, not the impact of mining on riparian areas immediate to, or downstream of, the powerful hydraulic "giants."

Aside from the question of supply, most observers at the time seem to have perceived no problems with the advance of hydraulic operations in the region. Walling, who published his chronicle the same year as the California court decision, seems to have foreseen it and turned it to his purposes. Endorsing the advance of hydraulic technology in Jackson and Josephine Counties, he supported a rough cost-benefit analysis with this conclusion:

> There is a great additional advantage in that the debris resulting from their working can never be seriously detrimental, as any injury to the navigation of the Illinois and Rogue Rivers and Applegate creek need not be a subject of solicitude.[165]

John and Marguerite Black, however, tell a story rich in its implications for hydraulic mining's impact on the land. Mary Buckley, long-time resident of the Applegate community of Ruch, was also one of the most resourceful, although perhaps by necessity. Her first husband died in 1852, shortly after they arrived by ox cart to northern Oregon. Her second husband and one of her children died around 1861. Her third husband, who mined at Steamboat, and another infant daughter died of small-pox in 1866. Her fourth husband divorced her in 1869. She married her fifth husband, John Buckley, in 1873. Persistence paid off: "John and Mary Buckley lived out their lives at their home on the east half of the Willard Spencer Donation Land Claim."[166]

It is Mary Buckley's son, Bill Smith, the last of her ten children, who merits our attention. He seems to have inherited some of his mother's resourcefulness. John and Marguerite Black tell us that Bill

> was ahead of his time in restoring land after placer mining. When the muddy water flowed downstream during the mining operations, he built brush dams and directed the water over leveled tailings so that soil was gradually deposited deep enough for crops to grow. Over several years, he developed about ten acres by this method.[167]

This is the story of soil's movement over the landscape. The original soil on Bill's place was long gone, washed away by previous miners, replaced by sterile tailings. Bill re-created a field, covering gravel with soil born upstream, borne downstream. He grew some crops. Then, the final chapter of Bill's story:

164LaLande, *Little Applegate*, p.20.

165Walling, History, pp.323-324.

166 Black and Black, *Ruch*, p.85.

167 Ibid., p.89.

> Many years later, a gold dredging operation mined out the Smith farm fields, and all that remains is a homesite.[168]

Bill Smith's story offers a glimpse of the impacts on the land of the hydraulic era. The relatively benign impacts of the earlier era must have been greatly intensified and exacerbated by the massive sedimentation increases of the hydraulic era. And though these increases still occurred primarily during high flow times of the year, it seems likely that chinook and coho fall spawning runs, and winter/early spring juvenile growth periods, would nonetheless have been severely impacted. Fishery biologist Rivers offers the view that the fall runs suffered most as a result of mining. Other impacts cited by Rivers include sediment deposition rendering spawning areas unusable, and a decline in aquatic insect populations.[169]

The Legacy of Hydraulics

With the geographic spread of mining and the arrival of hydraulic mining during the late decades of the nineteenth century, mining as a disturbance attained new levels in terms of both distribution and severity. The significant geographic expansion of this era has been documented above. In addition to this general expansion, hydraulic mining reached into new areas to access water. This expanded the distribution of disturbance outside the actual riparian areas where mining occurred. Water diversion and ditch construction were the main features of this new pursuit for water. The severity of impact varied with the scale of the diversion project, but flow reduction at the source was another consequence.

For hydraulic mining to be most effective, miners were required to expand their search for gold into alluvial deposits bordering the streambed. In many of these areas, tree cover proved a particularly effective barrier to hydraulic expansion. As with the earlier era of settlement, "the forest was considered a nuisance."[170] Often, however, this nuisance was only temporary. Current studies place nearly half of the forest in the Buncom Project area in the 120-year-old age class. (Only about 1% of trees exceed the 160-year-old age class.) This would have placed the origins of these trees in the 1870 period, or at the outset of the area's most extensive hydraulic era. Quite likely, these younger successional stands, dense with small diameter Douglas-fir and madrone, had their origin in fires set by miners to reveal the location of gold and facilitate its removal.

At that time, a good portion of the Buncom area would have appeared stripped of tree cover, possibly displaying many slopes and lower elevation hills covered with young manzanita or ceanothus. Looking up from the Sterling drainage, the forests must have seemed distant, forced into retreat higher up Anderson Butte, or into north aspect gullies like Deming Gulch, or Armstrong Gulch.

The Legacy of Settlement

As the distribution of agriculture and settlement expanded, these areas experienced increasingly severe modification of their primarily riparian and oak savannah/woodland communities. These effects were most prevalent in the vicinity of the original DLCs, the increasingly populated Williams area, and along the crescent from Murphy to Selma—thanks largely to the placement of the new road along this route instead of over the shoulder of Mooney Mountain up Deer Creek.

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[168]Ibid., p.89.

[169]Rivers, quoted in LaLande, *Little Applegate*, p.44.

[170]Zowada, "Great Moments."

In these areas, the easily accessible, larger pines experienced further attrition due to pressing construction needs. Oaks continued to be removed for residential clearings, fields, and pasture. Perhaps most significantly, the numerous sloughs, bayous, overflows, and springs referred to throughout original DLC notes were victims of channelization, their moisture drawn off to make further space for fields and pastures. The marsh communities were so effectively altered that today it becomes difficult not only to trace their original location but to even imagine large areas of tule marsh, and camas in riparian zones along the Applegate and Illinois Rivers and other major sub-watersheds. One such riparian community may have existed at the junction of the Applegate and Little Applegate Rivers, before beaver-seekers, miners, farmers, and channelization conspired to remove it.[171]

The impact on meadows has also been severe at higher elevations. Here, grazing and logging—yet to come in our chronicle—have been the primary agents of impact. Within the Little Applegate area, Rolle has concluded that "few small remote moist mountain meadows in the watershed can be found that approximate an original plant community composition."[172]

It is known that the natives of the region relied heavily upon camas as a dietary staple. It is perhaps not beyond reason to suggest that William Lewis, had his route extended further south, may have commented upon camas here as he did in southern Idaho, where a meadow rich in purple camas appeared to "resemble a lake of fine clear water, so complete in this deception that on first sight I could have sworn it was water."[173]

Reading the Surveyor's Notes

In areas of higher elevation, more rugged topography, or simply outside the primary spheres of human settlement and activity, GLO surveys took longer to complete. The townships running south from the Siskiyou crest along the Applegate/Illinois divide are a case in point. Although GLO notes do not comment directly upon change through the historic era, they do provide baseline data for a reading of this forested landscape at the turn of the century.

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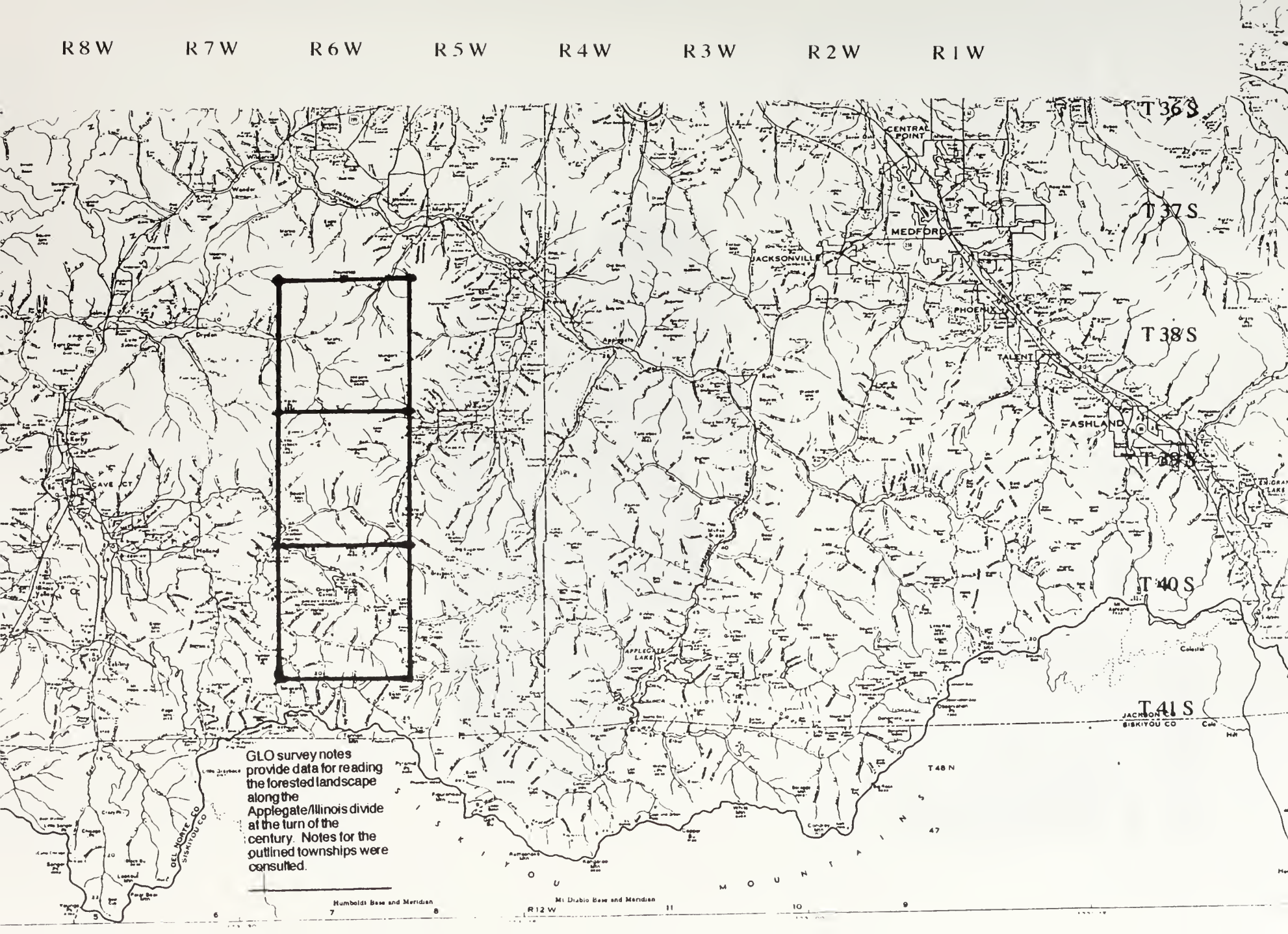
[171]Thomas Sensenig, personal communication.

[172]Wayne Rolle, Vegetation Appendix D, Botanical/Ecological Information for the Little Applegate Pilot Watershed Assessment, p. D1.

[173]Dee Strickler, *Wayside Flowers of the Pacific Northwest* (Columbia Falls, MT: Flower Press, 1993), p.35.


R8W
R7W
R6W
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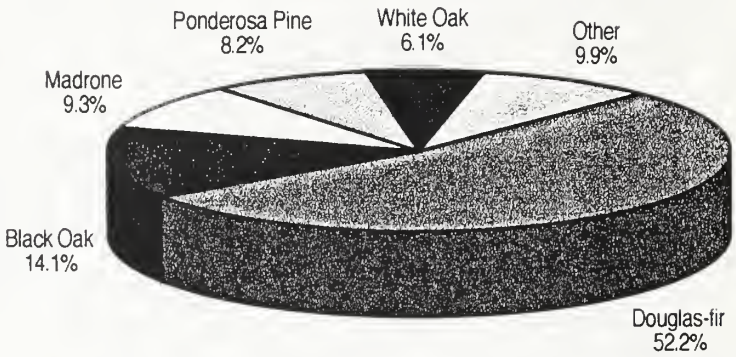
T36S
T37S
T38S
T39S
T40S
T41S
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND
CAVE JCT
APPLEGATE LAKE
JACKSON CO
SISKIYOU CO
DEL NORTE CO
SISKIYOU CO
T48N
GLO survey notes provide data for reading the forested landscape along the Applegate/Illinois divide at the turn of the century. Notes for the outlined townships were consulted.
Humboldt Base and Meridian
Mt Diablo Base and Meridian
R12W

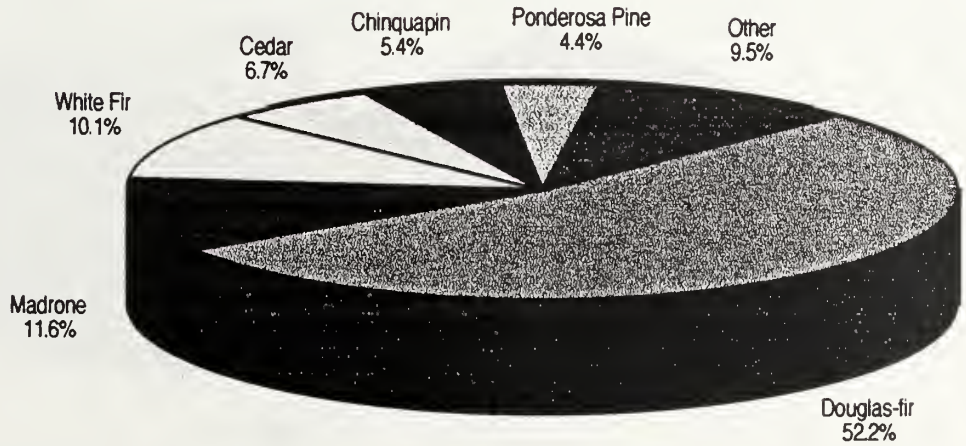
GLO: T38S/R6W

Species	#	range (inches)	avg. diam.	% of total
Douglas-fir	152	4-60	23.2	52.2
Black Oak	41	5-24	12.2	14.1
Madrone	27	4-20	9.6	9.3
Ponderosa Pine	24	5-48	21.2	8.2
White Oak	18	6-30	12.4	6.1
Sugar Pine	9	18-50	36.2	3.1
Cedar	8	5-30	15.1	2.7
Maple	5	6-24	15.0	1.7
Chinquapin	4	8-30	16.8	1.4
Alder	3	12-14	12.7	1.0
Total	291	4-60	19.4	(99.9)



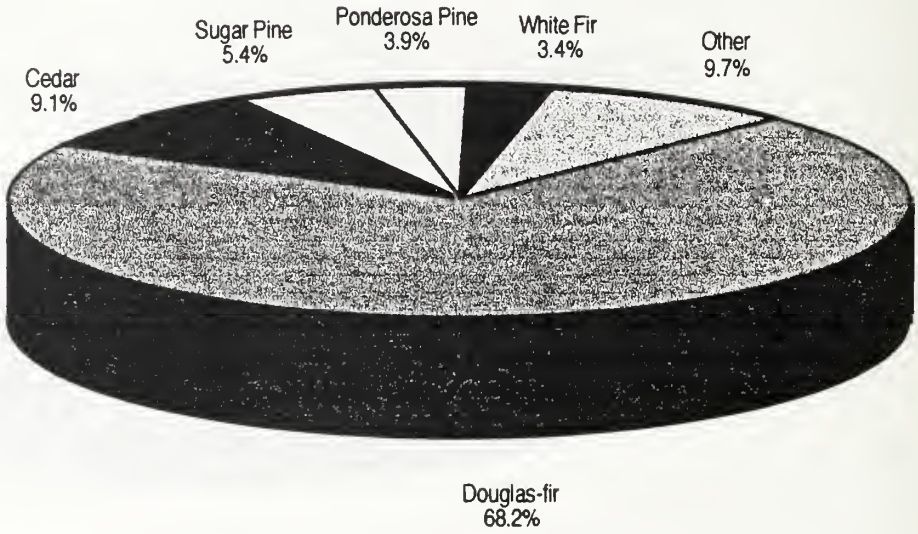
GLO: T39S/R6W

Species	#	range (inches)	avg. diam.	% of total
Douglas-fir	202	6-72	23.8	52.2
Madrone	45	4-28	15.1	11.6
White Fir	39	8-33	14.2	10.1
Cedar	26	8-60	20.9	6.7
Chinquapin	21	4-22	12.3	5.4
Ponderosa Pine	17	8-48	24.4	4.4
White Oak	9	6-26	13.1	2.3
Sugar Pine	8	12-56	29.9	2.1
Alder	4	8-10	8.8	1.0
Black Oak	4	3-20	11.5	1.0
"Burr Oak"	3	15-18	16.0	.8
Yew	3	12-18	16.0	.8
"Black Pine"	2	15	15.0	.5
Maple	2	10-20	15.0	.5
Dogwood	2	4-5	4.5	.5
Total	387	3-72	20.2	(99.9)



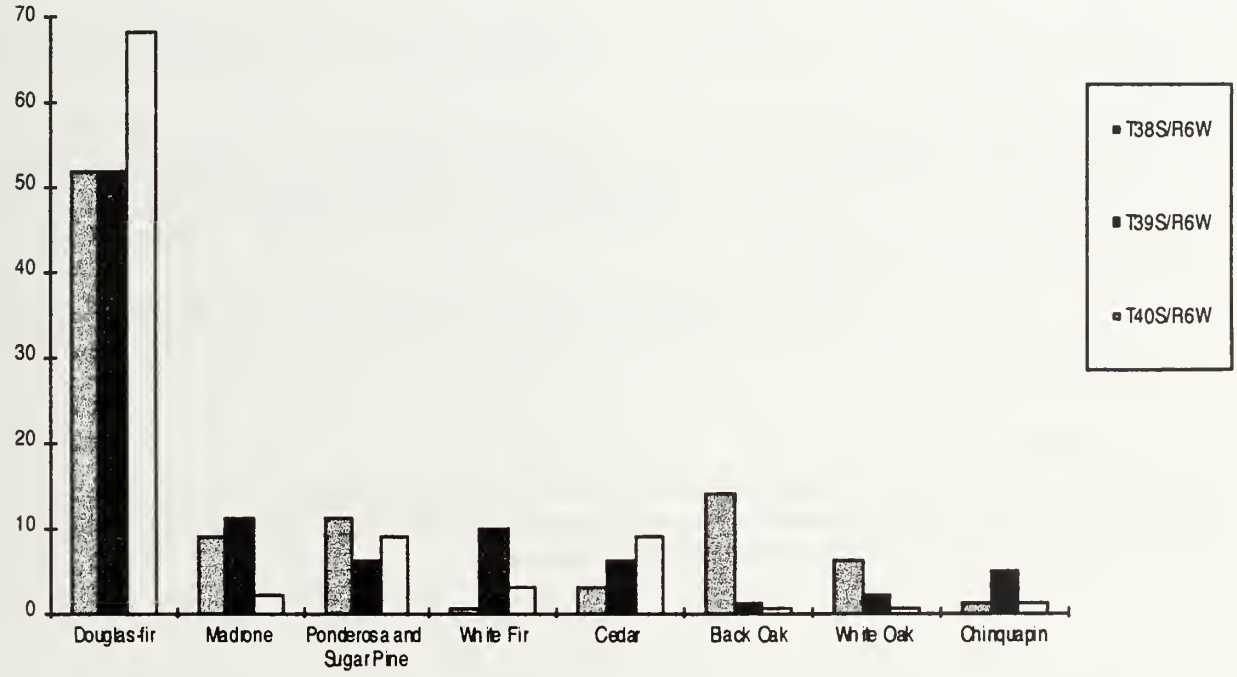
GLO: T40S/R6W

Species	#	range (inches)	avg. diam.	% of total
Douglas-fir	277	3-54	21.1	68.2
Cedar	37	5-50	16.0	9.1
Sugar Pine	22	5-54	27.0	5.4
Ponderosa Pine	16	5-40	15.2	3.9
White Fir	14	6-36	15.1	3.4
Madrone	10	4-24	12.3	2.5
Oak	8	5-10	6.2	1.9
Hemlock	6	10-24	20.7	1.5
Chinquapin	5	4-12	6.8	1.2
Port Orford Cedar	4	18-30	23.0	1.0
Alder	3	9-12	10.0	.7
Knobcone Pine	3	4-30	16.0	.7
Maple	1	10	10	.2
Total	406	3-54	19.7	(99.7)



These above townships basically run the north-south ridge dividing the Applegate and Illinois drainages. Approximately one-third of the area lies in the Applegate drainage, two-thirds in the Illinois basin. From the lower elevation north end (T38S/R6W), the area extends south from Roundtop Mountain (4,762 feet), encompassing the headwaters of Murphy, Deer, Powell, Munger, Williams, Grayback, Cave, and Sucker Creeks, as well as the highest elevation portions of the Sturgis and Steve Forks of Carberry Creek. At its southern end, the area climbs to Swan Mountain (6,269 feet), and Whiskers Peak (5,638 feet).

Across these townships, Douglas-fir was by far the most common species marked in the GLO survey. Both T38S/R6W and T39S/R5W contained Douglas-fir at 52.2% of total species marked. At the higher elevations of T40S/R6W, the percentage increased to 68.2%. At a general level of analysis, we see a large presence of oak woodland and mixed-conifer type communities. Within the mixed-conifer community, it seems likely that Douglas-fir associations were dominant.



The percentage of oak (white and black) and ponderosa pine in T38S/R6W (28.5% of total) suggest a significant proportion of oak woodland across this township. Quite likely, these communities existed in riparian areas along Deer and Murphy Creeks, and on more exposed southern aspect hillsides. It is this presence which distinguishes T38S/R6W from the higher elevation townships along the divide.

These higher elevation townships show far less oak-pine presence, and a significantly increased presence of white-fir, madrone, cedar, and in T39S/R6W, chinquapin. Within Douglas-fir associations, madrone often indicates fire disturbance. In this case, the presence of a higher concentration of madrone in T39S/R6W and T40S/R6W could indicate that these townships, in general, experienced regular fire activity, perhaps to a greater extent than neighboring T38S/R6W, which had madrone marked at only 2.5% of total. With an average diameter for madrone of greater than 15 and 12 inches, respectively, across these townships, it can be concluded that some of this noted fire activity dated to pre-historic times.

Incense cedar within the Douglas-fir series often indicates the presence of serpentine and periodotite based soils. These ultrabasics generally lie in greater concentration to the west of the study area, but the presence of cedar in these notes would indicate a significant presence in this area, particularly T40S/R6W. Incense cedar in Douglas-fir associations are commonly expected to be found at elevations in the vicinity of 5,000 feet, on moderately steep slopes (47% incline), with a north- to south-eastern aspect. It is interesting to note that contract surveyor Homer Angell's 1900 map of the original survey of T39S/R6W charts a "Cedar Flat" in the northern portions of sections 16 and 17, along the Munger Creek Trail into Williams. According to a current USGS topographic map, this flat lies at 4,400 feet of elevation in a southeast facing depression .

These survey notes also provide narrative information on the state of the forest communities along this crest. In T38S/R6W, the 1897 General Description relates:

> To make any of it profitable for agricultural purposes a system of irrigation will be necessary. Almost the entire surface of this township is covered with dense undergrowth but there is only a very little grass or other pasturage for livelihood.

This reference to "dense undergrowth" is common throughout the notes, primarily in reference to manzanita, arrow-wood, hazel, live oak, and chinquapin. T39S/R6W is also described as "covered with dense undergrowth."

This theme is consistent in T40S/R6W as well, where surveying was "exceptionally difficult" due "dense undergrowth." Most of this consisted of buckbrush, chinquapin, hazel, madrone, willow, alder, huckleberry, Oregongrape, laurel and maple. Here, the timber of the southern portion of the township is described as "poor quality and the southern exposures are largely open and brushy." The northern portion, by contrast, is

> heavily timbered with an excellent quality of douglas fir, white fir, Port-Orford Cedar, and sugar pine. Much of this timber, is fully matured and should be harvested, within the next few years.[174]

A Final Note

Our wandering grizzly can no longer provide a glimpse of the region. By the end of this era, grizzlies, once "found in great numbers," were absent. The loss of these large mammals foreshadowed intensified disturbance patterns yet to come.

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[174] All quotes and data are from original GLO survey notes.

CHAPTER THREE

MANAGEMENT SETTLES IN: 1900-1945

The Twentieth Century Dawns in the Siskiyous

Did the 20th century bring with it the mixtures of foreboding and hope that seem inevitably to accompany the arrival of new centuries among people who count their years by the hundreds? Did local visionaries imagine what transformations the new century would bring to their homesteads, to their community life, to the downward courses worn by familiar streams and the upward tracks worn by their cattle toward grassy high country glades in the late spring?

Did Ina Pursel know that her daughter Ethel, born in the early years of the century on an Applegate homestead, and whose life was daily intertwined with the life of the land for miles around, would see the end of the century approach from her narrowly bounded house and garden on a residential street in Jacksonville, a town kept alive by tourists who gaze at the house her grandfather built on another Jacksonville street over a century ago, and think it quaint?

We have these questions which hindsight evokes, but which the documents available to us leave unanswered. They float in our minds as we reach backward imaginatively for a feel of the coming of the twentieth century in the isolated river valleys of our study area.

We may not know what was expected, feared, or hoped for in the farmhouses of the Applegate and Illinois Valleys as the nineteenth century turned into the twentieth. But we know now what the twentieth century brought. On the landscape of the world, it brought mayhem. Human struggles for dominance over other humans, or for freedom from the dominance of other humans—these two at times indistinguishable—tore up the earth's covering and everything affixed to it, walking or sleeping on it, hidden inside it. Chemicals taken from the soil and mixed in lethal combinations were thrown back at the soil and at the men and women who crouched there in basements or behind hedgerows or in ditches, preparing their own chemicals for hurling. Flanders Fields dissolved in acrid mud and blood along the western front, Auschwitz filled its pastures with human ashes and its air with human smoke, Dresden turned to rubble and Hiroshima to vapor, Vietnam's rice paddies were fertilized with chemicals and lead dropped from circling helicopters, and the tears of children and grandmothers. Can we imagine a century of human history more cavalier in its treatment of the landscape and all that lives upon it?

This wider world, of course, impinged on the Applegate and Illinois Valleys, bringing tokens of its distant convulsions to bear on the folks who called them home. The first war and the second took a sampling of the young, returning only some of them to the spring cattle drives and Saturday night dances. The Great Depression dried up money, filled the woods with squatters and newly-inspired hard-scrabble miners, closed banks and snatched land from those whose sweat had labored to make it fruitful—but the ranching community, for the most part, held together.

Unquestionably, these intrusions from the outside world during the first half of the twentieth century registered in the bodies of the people on the land, breaking the calm of lives ticking mostly to the seasons—to the plantings and harvests, the floods and droughts whose minor cataclysms are somehow integrated by rural wisdom and repeated stories into the unremarkableness of rural life. But they did not dissolve the impression of seamlessness that memory brings to the narrative of these years. To those remembering, they pale in contrast to outside world's intrusion into the social fabric of the Applegate and Illinois valleys in the last half of this century, an intrusion represented

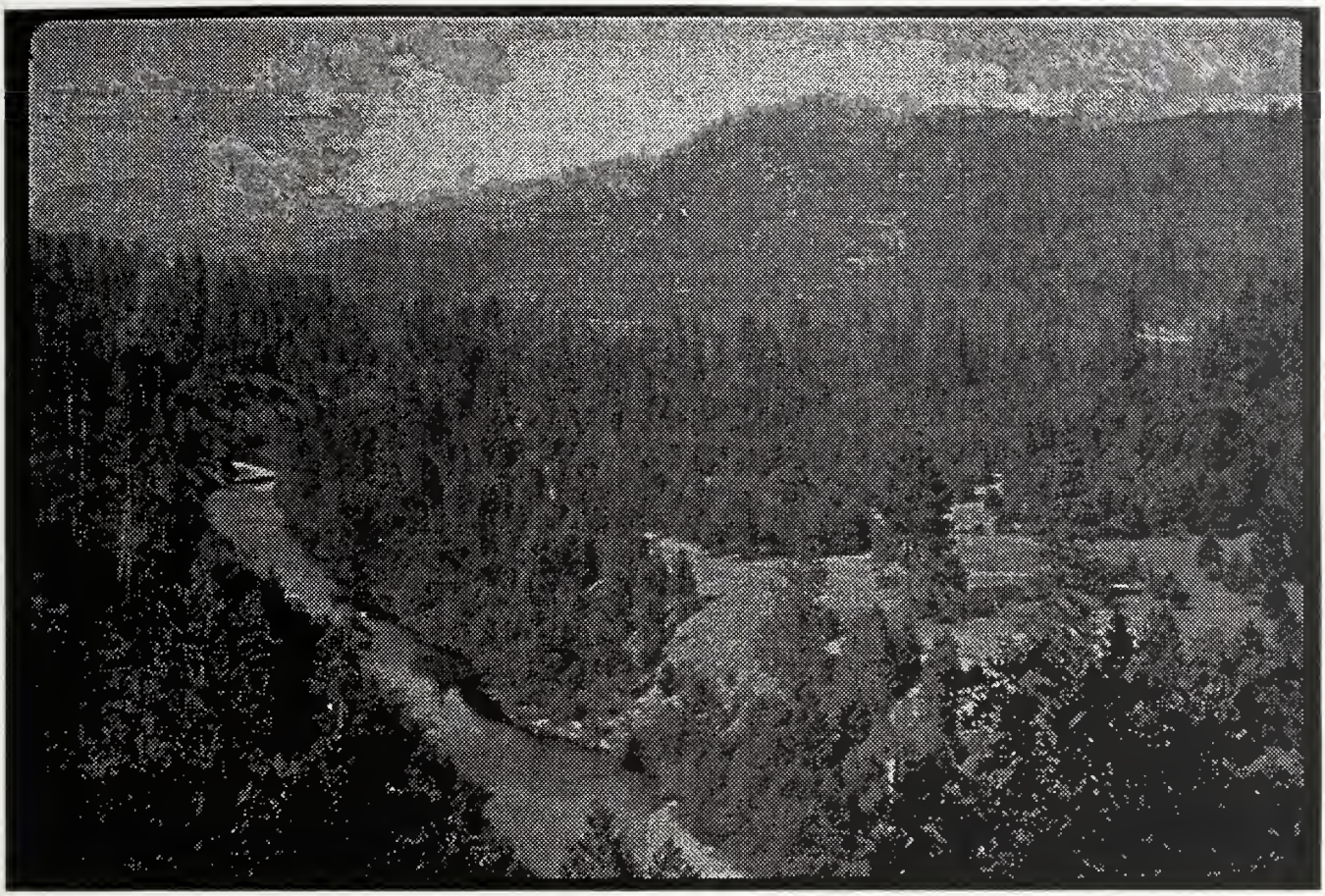
by other humans coming to live among them in numbers large enough to overwhelm their way of life and consign ranching to the status of a hobby. We will wait until the next chapter to weigh these intrusions and their marking of the land.

When we turn our glance from the twentieth century's foremost theaters of world conflict to daily life in a corner of southern Oregon, then, the contrast startles us. Historical documents and remembered narratives give an impression of timelessness, if time is generally marked off by cataclysmic changes. No bombs are dropped on this land, no portion of its population marked for sudden extinction. Life moves with a certain continuity, the landscape changes only very slowly, so slowly that old-timers today have a hard time remembering that it changed at all.

Push them, of course, and they'll tell stories of their own little cataclysms: of the day Fred West hung from a bridge across the raging Applegate, lost his saw and almost his life cutting a logjam loose; of the day the Jacksonville bank went belly up and took Patrick Swayne's mortgage with it; of the death of yet another child or the burning of yet another house. But these cataclysms somehow harmonize with what parents bequeath their children as to the expected rhythms of a rural culture.

Looking back on the first half of the twentieth century in the Applegate study area, we observe a ranching community tending to its business. Its business, mainly, is making a living, keeping the larder full, earning the dollars necessary to pay the mortgage and acquire the slowly-growing list of store-bought goods, helping and being helped by the neighbors, nurturing the spirit at the local dance hall or church supper.

This is a life on the land. Its texture is woven from the features, offerings and exactions of the land, conjoined to human sweat. Talk to the old-timers, and you'll hear the land as an almost silent partner in the chronicle of these years. Silent because, perhaps, one need not mention, except in passing, that which is so obviously there. Focus your question, however, and the land pops into relief. "Up past Star Gulch" or "all that country along Thompson Creek" or "you couldn't make it through the brush" or "the Billy Mountain fire" or "the glades up on Donomore." The land is assumed, but the land is also known in a way that the years seem unable, the mind unwilling, to erase.



This photo from the *Examination of Goat Ranges on the Crater National Forest, October 1917,* gives a general view of the lower Applegate Valley at that time.

One Story

Here is one of the stories told about a place on the land and a few of the people who spent moments in their lives there. John and Marguerite Black are the storytellers.

John Wright was born in 1800, place unknown. It took him most of his life to get to Oregon. He was in his sixties before he settled a homestead on good bottomland in the Upper Applegate, three miles upstream from the confluence of the Little Applegate and Applegate Rivers. This was a decade or so after the first gold strikes. The most arable land downstream was already distributed under the Donation Land Claim Act. John stayed long enough to make good his claim. In 1877 he sold out, and in 1881 he died in the County Hospital.

Theodoric (Tod) Cameron owned the Wright homestead until 1892, when he sold it to Patrick Swayne, an immigrant from Ireland. Pat did a little mining along the river. He cleared brush and trees to open up new fields. He also got into the cattle business. Here's how:

> He once purchased a trainload of Mexican steers and turned them out on the range, where these wild steers became even wilder. When it came roundup time very few were ever found. They simply left the country. He accepted this as part of the cattle business.[1]

Pat Swayne speculated on land as well as Mexican steers, buying and selling a number of local ranches with about the same amount of luck as he had in the cattle business. In 1907, financial pressure induced him to sell the Wright place to the Cantrall family, who then sold half a share to Gus Newbury, an attorney in Medford.

In 1913, H. P. Sellars came with his family to manage the Cantrall-Newbury ranch. He planted a large acreage in alfalfa "which produced high quality hay for beef and dairy cattle." Then he bought a herd of sheep. By the time the ranch was sold to Fred Straube in 1930, it comprised "215 acres of farm land, 700 head of sheep and the wool for 1930. Farm machinery included mowers, rakes, hay bucks, four head horses and a mule." The Straube family still owned the ranch sixty years later, when John and Marguerite Black compiled their chronicle.[2]

Now, the Wright homestead is called the "Straube ranch." It shared the land transformations of the period. Gravel panned, brush and trees pushed back, dams built and ditches dug, crops grown, cattle and sheep pastured, hay sold, fires extinguished, floods borne, roads built and fords established, lumber produced for houses, barns and sheds. A chapter in the history of the land.

Variations on the Theme

Chances are, if you lived in the Applegate or Illinois valleys between 1900 and 1945, you lived there to farm. If you lived there, that is—putting down roots, even though in different soil from time to time, marrying off your children to the children upriver, downriver, investing your life. Prospectors there were, and storekeepers and freight haulers and small agricultural processors and—for a time—the CCC boys. But most of them depended in one way or another on the farmers and ranchers, and a good number of them were the farmers and ranchers at least part of the time.

The commonest and the biggest agriculturally-based business during the first half of the century was built on the hoofs of beef cattle, sheep, and pigs running on the open range. Bill Smith is an example. He's the fellow who had earlier figured out how to corral somebody else's dirt in order to build a field on rock rubble. In 1916, he bought a fertile thirty-acre Applegate River farm half a mile west of the Hamilton Road intersection. "The farm prospered and Bill acquired more land

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[1]Black and Black, *Ruch*, pp. 116-117.

[2]Ibid., pp. 116-118.

until he owned 300 acres, all planted in grain and alfalfa. He also had cattle, sheep and pigs." His oldest son, Clifford, helped his father run the ranch, and eventually built his own cattle herd.[3]

Cary Culy was another typical Applegate rancher. Early in this century, he lived on the Applegate River near the mouth of Palmer Creek. What John and Marguerite Black say of him could perhaps be said of numerous other families in his time:

> Cary built a board and batten type house for his family across the fields close to the hill. His barn and corrals were nearby. He planted the main field to alfalfa, cultivating the top soil carefully to avoid rocks and stumps. With adequate irrigation, the alfalfa produced a good quantity of hay for his own beef cattle.[4]

But there were other ways to make money from the land. When Ethel West was still Ethel Pursel, her grandfather ran a sawmill, first along the Applegate River and then up the Little Applegate River along Yale Creek. Later, her husband Fred worked the sawmill too. They hauled trees out of their own woods and made it into lumber, custom orders for their Applegate neighbors. These weren't clearcuts. The trees were selected one by one because they fit the job. On the side, Ethel's family had dairy cows, ran beef cattle, raised a garden. Their life was a fairly typical life, mixed with the life of the land.[5]

Like the Pursel and West families, many of the farm families in the 1920s and '30s earned their way into the cash economy by keeping a few dairy cows. They used the milk for themselves and their calves or pigs, and sold the cream to creameries for making butter. One local creamery had already been built at the mouth of Thompson Creek by 1912.[6]

Henry and Florence Taylor and their six kids farmed the old Henry H. Brown DLC from 1910 into the 1940s. In 1931, they decided to go big into the dairy business. They put in a modern dairy operation and kept it going with up to twenty cows. In 1936, their son Edwin branched into garden produce. He raised 35 tons of onions to feed nearby CCC camps, and in 1937 he diversified into cucumbers for his new pickle factory. By 1940, he was selling his "Taylor Maid" pickle products region-wide. During World War II, the Taylor place supplied the army base at Camp White with "huge quantities of carrots, potatoes and onions."[7]

Long before Edwin got into pickles, Charley Smith got into beans. He lived on the old Sturgess ranch along the Applegate River. He raised white navy beans, and "every fall he would set out with horse and buggy, peddling his beans to housewives all around the valley." John and Lottie McKee, on the other hand, raised red Mexican beans on their Applegate River property. Their daughter Clara, born in 1904, helped out with the beans, which "had to be irrigated and cultivated, then threshed and cleaned before sale or trade." Clara also learned how to work with cattle and horses and raise a garden.[8]

Lester Sparlin lived with his family, one of the first in the area, on Panther Gulch Road. "In 1927 they had ten Jersey cows, about 2,000 laying hens and kept ten incubators going. He said they didn't suffer much financially during the Depression, because more people wanted to buy chickens then. They sold 40,000 baby chicks during one spring season."[9]

The Depression. The Sparlins' story reminds us that the world did indeed invade these valleys and leave its mark on the families who eked their life from the land.

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[3]Ibid., pp. 89-90.

[4]Ibid., pp. 136-137.

[5]Ibid., pp. 107-110.

[6]Ibid., p. 155.

[7]Ibid., pp. 78-80.

[8]Ibid, pp. 70, 134.

[9]Francis, *History*, p. 62.

Getting Through

"First, you must understand the Jerome Prairie Community of the 1930s." writes Vada Sweetland Walden. She wants to tell us that the good old days weren't always as good as nostalgia's artificial sweetening makes them out to be. Her account is a helpful balance to our story of life on the land in this era, specifically in the Depression decade.

What about Jerome Prairie in the 1930s?

> It was made up of farmers, so poor that a balanced meal was something we didn't know existed; we were lucky if we had enough clothes to cover our bodies and they were often way too large, with little children wearing grown men's or women's clothes. Shoes? Well, often we got a pair of shoes when school started in the fall, and if they wore out, or were outgrown, before spring when school was out, that was too bad. We went barefoot the rest of the year. Often my mother and I had boiled chicken wheat, wild greens, wild blackberries, and goat milk for our diet, in season, week after week. The only work to be had was cutting and selling firewood, picking strawberries, picking hops, digging gladioli bulbs, or selling cows' cream to the creamery in Grants Pass. Yes, the whole community was 'dirt poor.'

Still, the spirit needed tending. The burning of a brush pile, representing the backbreaking work of clearing what nature seemed ever vigilant to make uncleared, would be the occasion for a party. "And Oh! the fun of the evening!" writes Vada Sweetland Walden. "The huge pile of brush and stumps would burn high with flames and sparks shooting skyward and if someone later came down with a bad case of poison oak from the smoke, the fun was worth it." Then games and songs, and "the dirt would be packed hard around the fire by the tramp of feet, and often would be hard to plow for several years afterward." On hot summer days, the land offered another type of recreation: swimming parties on the Applegate River or Slate Creek, "where the water spilled over a big rock, digging a big hole and forming a beach of fine gravel."[10]

Most Years

Some weathered the Depression with minimal losses. Often enough, they did it with a little help from a variety of government programs.

In 1988, when Vada Sweetland Walden wrote her story of life in Josephine County, Charley Vencill lived on Browns Road, one of the few examples of the "old-time cowboy" still around. Charley had come to Williams during the Depression. He and his son paid $1,000 for their forty acres, built a barn from the trees they cut and installed a pond and irrigation system. He said they "ate lots of doe meat during the Depression," indicating that he was one of an army of "poachers" who killed what they had to to eat. Though Charley didn't mention poaching cattle, the Forest Service reported an increase in 1932 of cows being butchered on the range, not for financial gain but as a food supply.[11]

During the Depression, Charley worked for one of the New Deal programs, the Works Progress Administration. He also logged for Amos Smith's sawmill. Charley says:

> I logged with a team of Percheron horses, the biggest horses I ever saw. One weighed over 2,400 pounds and the other 2,300 . . . We dragged the logs out of the woods and a man

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[10]Vada Sweetland Walden, "Jerome Prairie and the Jerome Prairie Community Hall," in *History of Josephine County*, pp. 53-54.

[11]Brown, *Rogue River National Forest*, I, p. 262.

named Red Larimore, who used to live here, hauled them to the mill on a log wagon. He used four horses. Then along comes the Cat and out goes the horses.[12]

Charley lets us know that, by the end of the era, the times were changing for people who used the trees in the forest. We don't know whether Charley ever bought his own Cat. But if he did, he had a shot at becoming a central actor in the next era of our study, when logging came into its own. For a few decades at least.

The Cantrall story foreshadows a more mixed reality. Miles and Mary (Devlin) Cantrall lived on the Applegate River just above Ruch. "Miles raised hay and grain on the ranch. He also had beef cattle, horses, hogs, and dairy cows." Their son Harlan, the youngest of eight children that lived, made it through the Depression by participating in government-sponsored programs for raising sugar beets, "with considerable success."

When these programs, sponsored by the Jackson County Extension Service, were discontinued, Harlan went back to doing what he knew best—what most of the folks in the valley knew best. He grew cattle feed in his fields and ranged cattle on government land. John and Marguerite Black tell us how that worked.

> [Harlan] ranged his cattle with other stockmen of the valley on the low ranges in the spring and the high ranges in the summer and fall. Cattle raising was fairly profitable because of the expanse of open range, which cost little or nothing in the early days. Even after the Forest Service started issuing permits and charging fees, it was still possible to make a little money on cattle, most years."[13]

A fitting epigram for the central, though mostly quiet, drama of this period, to which we now turn: the arrival of the federal government on the lands, in the lives, of the people who lived in the Applegate and Illinois valleys.

And perhaps, too, a fitting epitaph. For it would be only a few years before people like Harlan, no longer able to make more than a very little money on cattle, most years, would find that, Depression or no, their best efforts could not prevent the cattle business from withering to a mere shadow of its former robust, seemingly eternal, self.

The Feds Take Charge

Disposing of the Public Lands

In the years surrounding the establishment of the Constitution of the United States, the federal government laid claim to most of the lands from the Appalachian Mountains to the Mississippi River. Over the next half century, as the nation expanded across the continent, it made good that claim as it delineated the ever-expanding national boundaries by purchase, treaty and military campaign.

The federal government's earliest approach to the disposition of federal lands was based on its need for revenue (it had few other sources available) and its desire that its own sovereignty over new lands be established, de facto, by the practice of citizens settling there. In a series of early land laws, it signaled its intention eventually to transfer all public western lands to private ownership. Two provisos would be maintained, however: that the land be paid for, not offered as a gift; and that surveys be done first to make settlement orderly. The public sale of lands was administered by

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[12]Francis, *History*, p. 62.

[13]Black and Black, p. 73.

the General Land Office, established in 1812, and the cabinet-level Department of the Interior, established in 1849.[14]

The Civil War period saw a heightened pace of land transfer. Huge acreages were granted to the Central Pacific, Union Pacific, Northern Pacific and other railways (200 million acres before 1900) to finance transcontinental rail lines. This land, by law, was to be sold to settlers, though in practice, it went as well to corporate entities. If you were short of cash, you could pay a filing fee and get 160 acres of western land under the 1862 Homestead Act, so long as you lived on the land for five years (to "prove up" your claim). These laws and continuing older programs transferred nearly 550 million acres to farmers by 1900. In 1862, Congress established the Department of Agriculture to give aid to these farmers. The Department gained cabinet status in 1889.

Until the late nineteenth century, farming was the only use of the land recognized by Congress. This resulted in ongoing citizen actions to "liberate" timber from the public land, much of it illegally. In the 1870s, Congress recognized the growing value placed on timber in the West. It passed the Timber Culture Act (1873), and the Timber and Stone Act (1878), both of which put public lands into private hands on easy terms for the cultivation and harvesting of timber.

At the same time, however, an environmental ethic was growing in the land management community. In the 1870s, John Muir was just beginning to dramatize the need to preserve public lands. Also by the 1870s, George Perkins Marsh's 1864 classic, Man and Nature, was being quoted in annual reports of the Interior and Agriculture Departments to warn about the deterioration of the environment. Franklin B. Hough, a key figure in the American Forestry Association, used census reports effectively to show that timber supplies were being exhausted.

In 1873, Hough read his paper, "On the Duty of Governments in the Preservation of Forests," to a professional meeting in Portland, Oregon. The delegates joined him in sending Congress a memorial "on the importance of promoting the cultivation of timber and the preservation of forests." The memorial warned of an impending timber famine, and called for "a commission of forestry" to report on the condition of woodlands in America. Hough secured the endorsement of the commissioner of the General Land Office and the Secretary of Interior, and presented the memorial to President Grant personally. Grant sent it on to Congress where, after several years of lobbying by Hough, a forestry study was finally authorized. At the last minute, parliamentary maneuvering inserted the item into an Agricultural - not Interior - appropriations bill. In this manner, nationally sponsored research on forestry matters was initiated.

The Secretary of Agriculture appointed Franklin Hough to carry out the study of the nation's forests. His 650-page report, a year later, bemoaned the thievery of public timber, the lack of federal jurisdiction over private timber property, and the shrinking public domain on which forests could be preserved. Hough continued to lobby for laws and money to make forestry preservation possible, gaining powerful adherents in the Congress. In 1881, the Department of Agriculture opened a Division of Forestry. In 1882, Hough urged "that the principal bodies of timber land still remaining the property of the government . . . be withdrawn from sale or grant" and administered so as "to secure an economical use of the existing timber." Hough died in 1884 without the chance to see his recommendations accepted by Congress.

Conserving the Public Lands

By the 1890s, the presence of corruption in public land sales, fueled by rising timber prices, was becoming public knowledge.

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[14]The material for this and the next five paragraphs is drawn from Harold K. Steen, *The U.S. Forest Service: A History* (Seattle: University of Washington Press, 1976), pp. 4-20.

> Throughout the Pacific Northwest timber speculators, land fraud experts, mill owners, and dishonest politicians began a systematic assault on the public domain. These operators stole hundreds of thousands of acres of lands through illegal or dubious dealings through entries on public lands under the Timber and Stone Act, the Swamp Lands Act, the Desert Lands Act, and direct grants to railroad and road companies.[15]

Typically, lumber companies would persuade individuals to file for land under the Timber and Stone Act without any intention of working on the land as their claim required. Instead, these "entrymen" would turn their claims over to the company for a modest sum. An estimated half to three-quarters of these land claims were fraudulent.[16]

In these years as well, German forester Bernhard Fernow, newly appointed as chief of the Division of Forestry, was warning of the "reckless and shameful deterioration and depredation" of the public forests. Congress finally reacted to public land fraud, and heavy lobbying by the American Forestry Association, to pass the so-called Forest Reserve Act of 1891.[17]

Under the Forest Reserve Act, the president was authorized to designate public lands "wholly or in part covered with timber, or undergrowth, whether of commercial value or not, as public reservations." By the end of 1892, President Harrison had set aside fifteen reserves totaling thirteen million acres, including the Yellowstone Forest Reserve. By 1896, President Cleveland had added five million more, and pushed Congress hard for the means to manage and protect them.

Then on Washington's Birthday, 1897, over strenuous objections from western legislators, but promising public access for timber, grazing and other uses, Cleveland established thirteen forest reserves totaling 21 million acres of public land. McKinley's Congress confirmed Cleveland's action by passing the Pettigrew Amendment, often called the National Forest "Organic Act", setting down guidelines for federal forest management that were not superseded until the Multiple-Use Act of 1960.

The Pettigrew Amendment dictated that reserves could only be established "to improve and protect the forest . . , or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States. . . ." It provided for the orderly, supervised sale of mature or dead timber at or above market value. For the present, the forest reserves would be administered by the Department of Interior, although very quickly the Department of Interior began consulting and following the lead of the energetic young chief of the Division of Forestry in the Department of Agriculture, Gifford Pinchot.

In 1902, the Department of Interior published its policy manual for the reserves. It was probably written by Gifford Pinchot. It set out guidelines for the conservation and maximization of various forest-land resources; prohibited grazing unless it could be done without damage to the reserve; required sheep to be grazed in flocks, but allowed cattle to roam free; permitted free use of timber by private individuals (not corporate entities); and required timber trespassers, if apprehended, to pay full market value of the timber they stole, while it left unauthorized grazers off with a handslap. It offered this general admonition:

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[15]Beckham, *Siskiyou National Forest*, pp. 147-8.

[16]Other adventures of the era are recorded in Stephen A. D. Puter's 1907 *Looters of the Public Domain*. From the Oregon State Penitentiary, the "King of the Oregon Land Fraud Ring" revealed tales of public land fraud. Steen, p. 7n, cites Roy Robbins, *Our Landed Heritage: The Public Domain, 1776-1936* (Lincoln: University of Nebraska Press, 1942) and Everett Dick, *The Lure of the Land: A Social History of the Public Lands from the Articles of Confederation to the New Deal* (Lincoln: University of Nebraska Press, 1970); also "outraged by land fraud" is John Ilse, *The United States Forest Policy* (New Haven: Yale University Press, 1920).

[17]Unless otherwise noted, material for the remainder of this section is drawn from Steen, *Forest Service*, pp. 26-85.

> Keeping in mind the object and purpose of the reserves and their forests, it is clear that the first and foremost duty of every forest officer is to care for the forest, and every act, every decision he is called upon to make should be guided by the thought, will it improve and extend the forest?

In 1901, Pinchot's personal friend, Theodore Roosevelt, entered the White House upon President McKinley's assassination. Pinchot had pushed for several years to transfer custodianship of the forest reserves from the Department of Interior into the Agriculture Department where, to his mind, the foresters were. Many western Congressional representatives opposed this move, thinking Agriculture too concerned with agriculture, naturally enough, and not enough with more wide-ranging resource use. In 1905, Roosevelt signed legislation that transferred what was now sixty-three million acres of forest reserves to the Agriculture Department's Bureau (formerly Division) of Forestry and re-named it the United States Forest Service. Gifford Pinchot, then only thirty-nine years old, was now fully in charge of a burgeoning federal forest system.

In his instructions to Chief Forester Pinchot, the Secretary of Agriculture articulated the philosophy of the new Forest Service:

> You will see to it that the water, wood and forage of the reserves are conserved and wisely used for the benefit of the home builder first of all, upon whom depends the best permanent use of lands and resources alike. The continued prosperity of the agricultural, lumbering, mining and livestock interests is directly dependent upon a permanent and accessible supply of water, wood, and forage, as well as upon the present and future uses of these resources under businesslike regulations, enforced with promptness, effectiveness and common sense. In the management of each reserve local questions will be decided upon local grounds; the dominant industry will be considered first, but with as little restriction to minor industries as may be possible. . . . Where conflicting interests must be reconciled the question will always be decided from the standpoint of the greatest good of the greatest number in the long run.[18]

In 1907, the forest reserves were renamed national forests. According to Gifford Pinchot, the new name reinforced the Service's intention not to "reserve" these lands but to make them available for use, particularly to local interests. In his view, use was not contrary to conservation. Pinchot quickly produced the Use Book, a manual outlining the ranger's responsibilities, small enough to fit into the shirt pocket. Its motto:

> Forest reserves are for the purpose of preserving a perpetual supply of timber for home industries, preventing destruction of the forest cover which regulates the flow of streams, and protecting local residents from unfair competition in the use of forest and range. They are patrolled and protected, at Government expense, for the benefit of the Community and home builder.

Pinchot's manual stated explicitly: the "prime object of the forest reserves is use." But, as he put it in another early Forest Service document, Pinchot didn't want the national forests "skinned." "The man who skins the land and moves on does the country more harm than good."

Forest Management Arrives in the Siskiyous

Among the tracts removed by Grover Cleveland from public sale in 1893 was the Cascade Range Forest Reserve. It contained 4.5 million acres, stretching along the Cascades, from the Columbia River almost to the California border. Also established was the Ashland Forest Reserve, containing 18,500 acres in Jackson County and including the eastern fringes of the Siskiyou Mountains around Mt. Ashland.

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[18]quoted in Brown, *Rogue River*, I, p. 148.

In 1906, the Siskiyou Forest Reserve was added to the system, with its headquarters in Grants Pass, over some local opposition. ("It is claimed by the people of the counties affected [that the Forest Reserves] will greatly militate against their development."[19] Soon after, the headwaters of the Applegate were added to the Ashland Forest Reserve. The 1907 re-naming of these reserves and the 1908 augmentation and re-shuffling of acreages and re-organization of the system left the study area under two jurisdictions: Siskiyou National Forest and Crater National Forest. (The latter was re-named the Rogue River National Forest in 1932.)

During its formative years in the 1890s, the Forest Reserve system was staffed by a few dozen supervisory personnel and 215 rangers—nationwide. Fifty rangers, earning $50 a month, were hired to patrol the huge acreage of the Cascade Reserve, "to prevent forest fires, and trespassers and depredations from all sources."[20]

As the rangers proved their worth, staffing levels began to rise. Just after the turn of the century, Langell supervised a staff of rangers on the Ashland Reserve fluctuating between one dozen and several dozen on a seasonal basis.[21]

Until 1913 or so, the center of gravity for administration of the Applegate portion of the national forest seems to have been in Ashland. John Gribble was Ranger there during the 1910's. His diaries indicate that, although he spent a great amount of time on horseback travels in the Applegate, he lived and worked out of an office in Ashland. For a few years, the Little Applegate was joined to the Ashland watershed as District #6; the Big Applegate and Thompson Creek were District #7, although they were administered by District #6 except during fire season. Gradually, however, the Applegate gained its own center of gravity. In 1918, Districts #6 and #7 were combined to form Applegate District #5, and from then on the rangers responsible for managing the Applegate area's national forests were stationed full-time in the Applegate Valley.[22]

The symbol of the Forest Service's permanent presence in the Applegate was the Star Ranger Station. It was built along the Applegate River near the mouth of Star Gulch in 1911. John and Marguerite Black tell us it featured "a 10-acre pasture and a barn for the horses and mules."[23] The name that seems, in the memory of Applegate residents, to be synonymous with the Star Ranger Station and Forest Service activity generally during the first half of the century is Lee Port. Port moved into the Star Ranger station in 1918 to supervise the new Applegate District #5, and stayed until his retirement in 1945.

The Forest Service also built a ranger station farther up the Applegate River at Hutton, on the California border. William Fruit's long tenure and activity there are memorialized in the designation of Fruit Mountain and the Bill Fruit Trail, along the Middle Fork of the Applegate River, in his honor.[24]

Southern Oregon press accounts at the time reflect the public's understanding of these early rangers as primarily dedicated to fire suppression.[25] Newspaper voices seemed to welcome this emphasis. Nat Langell, the first Ashland Reserve supervisor, achieved the status of a local hero by leading parties of men to put out fires in the summer of 1898. "Forest fires on Applegate are not burning so fiercely since Bro. Langell's forest rangers went on duty," read one notice in the Jacksonville

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[19]Ashland *Tidings*, June 8, 1903, quoted in Brown, *Rogue River*, I, p. 42.

[20]Ibid., pp. 21-23.

[21]Ibid., p. 32.

[22]Ibid., pp. 106, 127.

[23]Black and Black, *Ruch*, p. 123.

[24]Ibid., *Ruch*, p. 123.

[25]Brown, *Rogue River*, I, p. 23.

Democratic Times.[26] A month later, Langell was hailed for ridding the valley's atmosphere of smoke:

> Forest fires are not burning so fiercely and the atmosphere is comparatively free from smoke, thanks to Uncle Nat Langell and his forest rangers.[27]

This kind of public notice continued over the next few years. In 1902, the Ashland Tidings praised the rangers for their "splendid work" in preventing destructive fires, "notwithstanding the long dry spell and unusually large numbers of campers in the mountains this year menacing the timber with their campfires." It noted that "the fires that were raging on the southside of the Siskiyous in the Beaver, Grouse and Hungry Creek sections" of the Klamath drainage had recently been extinguished by heavy rains.[28]

But the Forest Reserve Manual, published in 1902, made it clear that rangers were not to restrict themselves to fire suppression. It included instructions on issuing permits for grazing, cabins and ditches, and for regulating timber sales, mining and other activity on the reserves. Rangers reported doing timber marking and scaling, timber harvest monitoring, trail building, brush burning, and a variety of other activities. Stopping timber theft in the Ashland Reserve, which included the Applegate Valley, seems to have been a high priority during the early days of the reserve system.[29]

Certain of the early rangers' tasks grew out of the need to establish the boundaries of the new and growing national forest system, to become familiar with the resources that lay within the boundaries, and to settle competing claims for resources (such as those filed under the Timber and Stone Act). Consequently, early rangers busied themselves with extensive land surveying and inventorying. They examined homestead claims entered under the Forest Homestead Act of June 11, 1906. In 1907, the Ashland newspaper reported that William G. Kropke, the Ashland Ranger from 1902 to 1908,

> spent nearly all last week in the stone and timber region about the headwaters of the Applegate, which area was recently added to the reserve. He was working under instructions from the department to examine into the character of certain lands within the reserve upon which timber entries had been accepted prior to their withdrawal as an addition to the government reserve, and upon which proof will be submitted shortly by the applicants to the purchase.[30]

Much of the surveying of forest reserve/national forest boundaries was done by specially contracted surveyors. According to a historian of the Forest Service,

> those assigned to the work viewed themselves as members of an elite group. On horseback, working alone, these men accounted for perhaps twenty thousand acres each day. Some claimed 3 million acres per man during a field season.[31]

Early Forest Service supervisors seemed to know they were in on the ground floor of an historic development in resource conservation. "Supervisors had to recruit a force of rangers, explore and map the million or so acres of their forest, locate and build ranger stations, locate and build a road and trail system, and then set about the routine business of implementing programs as provided by the Use Book." One early supervisor in Montana reflected on his own sense of exhilaration:

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[26]August 18, 1898, quoted in Brown, *Rogue River*, I, p. 23.

[27]Jacksonville *Democratic Times*, September 18, 1898, quoted in Brown, *Rogue River*, I, pp. 23-4.

[28]August 18, 1902, quoted in Brown, *Rogue River*, I, p. 36.

[29]Ibid., pp. 35, 38, 42.

[30]Ashland *Tidings*, October 14, 1907, quoted in Brown, *Rogue River*, I, p. 68.

[31]Steen, *Forest Service*, p. 84.

> The feeling of proprietorship . . . is so great that it is almost as though [the supervisor] owned the land himself, and he gets about the same pleasure and satisfaction out of it.[32]

Early Forest Service documents, however, offer the portrait of a group of talented and dedicated rangers upon whom impossible demands were already being laid: too much ground to cover, too many tasks to accomplish, too many people to see and to please, too many reports to write. And of course, too few financial or personnel resources with which to do it all. The cross-currents which buffet federal land administrators today were already blowing furiously by the second decade of the century: care for the land versus use of the land; the need to maintain friendly relations with local residents and resource users while regulating and restricting their use of the federal lands; the requirements of office and paper work versus the mandate to be out on the ground; the out-of-touch perspectives of desk jockeys in Washington, D.C. versus the "common sense" dictated by local realities.

This portrait of impossible demands and local frustration is nowhere more poignantly illustrated than in the Forest Service's attempts, since its earliest years, to quell the threat of fire and minimize the threat of livestock overgrazing on the federal lands. These were the two most vexing administrative challenges of the first half-century of federal land management.

Suppressing Fire

"It is not understood why forest fires should get away from the rangers."

Early Rogue Valley newspapers leave the unmistakable impression that when summer came to southern Oregon, with its long seasons of hot, dry weather, fire came along. Only an extraordinary summer saw smoke-free air. Residents complained constantly of the irritation to lungs and eyes represented by the smoke coming off of vast burning landscapes.[33] Jacksonville newspapers in 1869 and 1870, for example, reported that "smoky weather has become a nuisance"; that the smell of "burning pitch" was pervasive; that the smoke was once again "coming in on us now" and getting "worse and worse;" that "reckless rovers and hunters who are certainly devoid of good judgment to say the least" were torching off fires in the mountains. Some of the smoke filling the air in Jacksonville, it noted, was coming from fires in the Applegate.[34]

Before the establishment of federal forest reserves, little energy was directed toward putting out these fires. The relatively primitive existing means of communication and access made such an effort seem futile. Fires ran free until they burned themselves out, or until September or October rains blew in and soaked them down. Next summer, more fires, more smoke, more futile citizen complaints.

The new federal forest officers decided to change all that. To the late nineteenth century mind, fire symbolized the very opposite of the values that had instituted the new forest reserve system. Federal management, as all modern bureaucracy is intended to be, was about order, rationality, purposefulness, efficiency, economy. It would take almost a century for federal forest managers to perceive those very values paradoxically served in such a seemingly chaotic phenomenon as wildfire. For the moment, fire represented utter disorder, irrationality, thoughtlessness, inefficiency and waste. It personified a potentiality that challenged the intelligent powers of human beings to control their environment, to use their environment for their own purposes. It had to be stopped.

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[32]Ibid., p. 85.

[33]Brown, *Rogue River*, I, p. 13.

[34]Jacksonville *Democratic News*, July 10, 1869; August 14, 1869; September 24, 1870.

From the 1890s on, federal land administrators in Washington indicated their distaste for fire, and made it clear that they would not accept its challenge to their control. Rangers were simply expected to stop it from happening. Instructions to the field from the General Land Office in 1903 set what seem today to be almost inhuman standards. They show the naiveté of office personnel a continent away from feeling the heat and fury of an actual forest fire. Excerpts:

> The patrols service should be so organized that every threatened portion of your territory may come under the supervision of your rangers. . . .
>
> It is not understood why forest fires should get away from the rangers, or rather why they do not find them and extinguish them more promptly. It seems reasonable that a ranger provided with a saddle horse and constantly on the move, as is his duty, should discover a fire before it gains much headway.
>
> You must not confine your ranger force too closely to cutting trails or attending to other business to the subordination of the fire question.
>
> It would seem . . . that if the ranger does his duty, fires would be discovered so quickly that it would seldom be necessary for him to employ extra men.
>
> It is believed that the force of rangers allotted to the different reserves for the coming season will be sufficient to afford protection against all fires.
>
> In the absence of a satisfactory explanation, supervisors and rangers will be held personally responsible for any fire that is allowed to escape.[35]

This sort of redundancy within one two-page document signals the level of demonization which fire had, quite understandably, attained within a decade of the establishment of a new federal forest system.

"The sentiment of the community is in general unfavorable toward fire protection."

What did this mean on the ground? The answer is evident in documents left by the earliest rangers in the Applegate: exhaustion and frustration.

Horace G. Whitney staffed the Thompson Creek Ranger Station in 1910. He reported that he was responsible for 80,000 acres of public land and another 60,000 acres of "alienated" land to patrol for fires. To cover this ground adequately, he would have to put in sixty to seventy miles a day on horseback. In fact, he was able to cover only about 20% of it daily, the rest of it every other day or weekly. A formidable accomplishment nonetheless.

Access problems seemed insurmountable. "There are roads traversing the main creek valleys," he wrote, "and in some places are branch roads running a mile or two up the larger tributaries. There are no Forest Service roads or trails in this district, and one must depend on cattlemen's trails; and none of these are graded up and usually follow the lines of least resistance.... In several cases this summer it was impossible to reach the fires with men and supplies until two days after first sighting the fires...."

Whitney reported that there were no Forest Service telephone lines in his district: "A line or two built across the mountains would greatly increase the efficiency of patrol, making it easier to report without coming out to the valleys, thus leaving the forest unprotected, and for directing the movement of crews on other fires without abandoning patrol to do so in person."[36]

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[35]Quoted in Brown, *Rogue River*, I, pp. 39-40.

[36]Quote, Ibid., p. 105.

The summer of 1910, which Whitney's report reflects, was "an unusually dry one" and "witnessed an unprecedented number of fires upon the Crater National Forest," according to a Forest Service historian. Thirty-seven fires burned sixty thousand acres. Seventeen rangers and other guard personnel supervised a thousand fire-fighters on the Crater Forest, eventually augmented by five companies of United States Troops sent by the War Department. Most of the fires burned in the Cascades, but the Windy Peak fire in the Applegate drainage burned over an area of 2,500 acres that summer. No wonder that the early rangers in the Applegate area reported that fire protection virtually monopolized their work between July and September each year. Some additional work was accomplished, but much of that—like trail construction and telephone line installation—was fire-related as well.[37]

1910 was an unusual summer for fire frequency, perhaps. But existing records indicate that the struggle against the ravages of fire was ongoing during these first decades. Upwards of a hundred fires burned the landscape each summer throughout the Crater and Siskiyou National Forests. In the Siskiyou Forest, fires burned 105,000 acres in 1917, 31,000 acres in 1929, 23,000 in 1931, 19,000 in 1932, and 47,000 in 1938, before decreasing in their coverage to below 2,000 acres in the worst years after 1940. The Siskiyou Forest estimated that between 1927 and 1952, over 270 million board feet (MMBF) of timber had been lost to fire. During the same years, about 426 MMBF had been logged.[38]

These figures are not broken down for the Applegate and Illinois Valleys, but anecdotal records indicate that at least a few fires broke out there each summer, occasionally burning fairly large acreages, especially in the lower elevation, brushy, south- and west-facing slopes. Records kept throughout the 1910s and 1920s on the Crater National Forest indicate that many of these were caused by lightning. But a surprising number—often up to half—were labeled "man-caused." In an especially bad year, 1928, which was "the driest of record in Oregon," 115 fires burned. Of those 39 were caused by lightning, 22 by smokers, 7 by campers, 1 by a brush-burning project that got away, and 2 by "miscellaneous causes." The remaining 44 were "of incendiary origin."[39]

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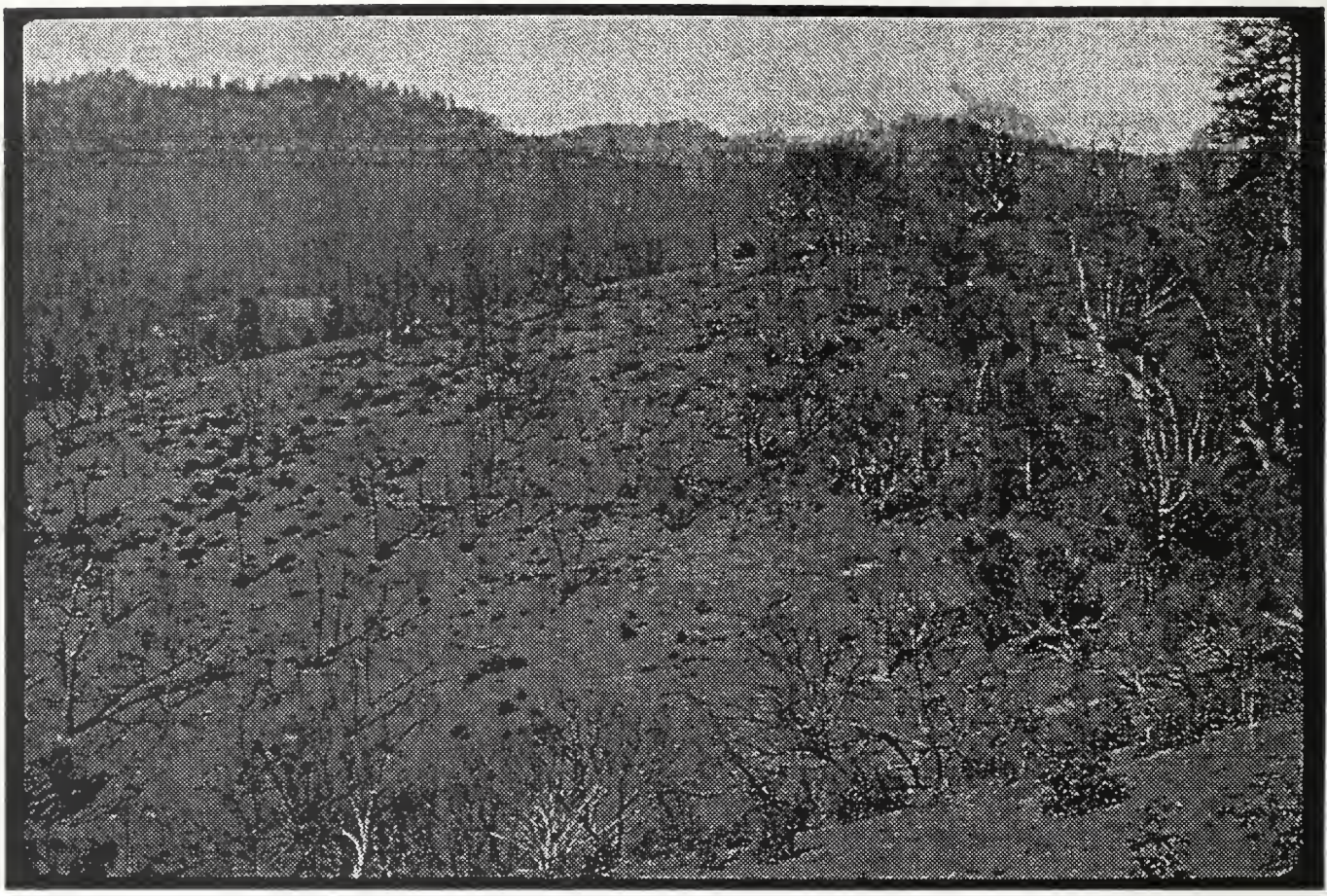
[37]Ibid., p. 127.

[38]*Siskiyou National Forest Timber Management Plan*, 1954, p. 4.

[39]Brown, *Rogue River*, I, p. 245.



Anecdotal records indicate that at least a few fires broke out each summer, occasionally burning fairly large acreages, especially on lower elevation slopes. This photo, from the *Examination of Goat Ranges on the Crater National Forest, October 1917,* shows a burn in the "lower brush type" of the "Applegate Division."

This forest-wide pattern seems representative of the Applegate region as well. If anything, incendiary fires comprised an even larger number of wildfires on the Applegate than in the Cascade portions of the Crater Forest. Horace Whitney reported many incendiary fires on his Thompson Creek district in 1910. And Forest Examiner Harold D. Foster reported that "in 1914 and 1915 numerous incendiary fires occurred in [the Little Applegate] district, and particularly in 1915 large areas were burned over. The damage consisted mostly in the killing of reproduction and the denudation of brush-covered slopes." Foster counted a total of 24 fires in the Little Applegate that year. Only two were caused by lightning and another was caused by campers. One was known to be incendiary. The other nineteen were of unknown origin. Foster believed it to be "very evident that a major portion of unknown fires resulted from incendiarism." He thought lightning, which was a major cause of fires in the Cascade Mountains, was "an unimportant element" in the cause of Little Applegate fires.[40]

Foster's findings for the Big Applegate were even more dramatic. In 1915, 192 fires burned in the district, the largest blackening over a thousand acres on Palmer Creek. Only eighteen, or about ten percent, were lightning-caused. Campers lit fourteen and brush burning lit eight. Known incendiary fires totaled 72. But another 74 were of "unknown" origin, and Foster believed that most of those were "undoubtedly" of incendiary origin.[41] It is clear from figures like these, as well as from anecdotal evidence, that the culture of the Applegate was a culture of fire, well into the twentieth century.

Was all this fire primarily an evidence of the "vandal spirit" that afflicts many boys and men, as the Jacksonville Sentinel suggested in 1903?[42] Probably not, although simple vandalism was probably not entirely absent in that day, any more than it is in ours. Most documentation, however, points to the probability that more "rational" motives animated the fire bugs of the Applegate Valley from first white settlement well into the twentieth century.

The earliest white settlers were primarily miners. We have plenty of evidence that placer miners in the Applegate set whole hillsides on fire to remove any vegetative obstacles to their ransacking of the soil for gold. Fire was also an effective way for early farmers to begin making tree-covered or brushy fields available for pastures and cropland. Settlers set fires to encourage the growth of tan oak to feed the hogs they set loose in the hills. Fire was used to clear vegetation for building trails or roadways and then to keep them clear of obstructions to travel.

All these uses of fire were directed at natural vegetative cover that represented an obstacle to the uses for the land that preoccupied the first period of settlement—vegetation that early white residents considered essentially without value. Fire turned out to be the most effective technology for removing such vegetation.

Over time, this well-established fire technology found other uses. A surprising number of campers were using the federal forestlands by the end of the nineteenth century. "Many of the conflagrations [in southern Oregon] spread from campfires, which the settlers rarely took the trouble to extinguish when breaking camp," intoned a 1900 government study of the Cascade Range and Ashland Reserves.[43] A 1913 Crater National Forest report covering District #6, which included the Little Applegate, noted that the headwaters of Griffin, Anderson and Wagner Creeks were heavily used by campers. "Some of them need careful watching in order to see that carelessness is not exercised," it warned. No doubt some of these campers wandered over the divide onto the hot south and west facing slopes of Applegate country. But their activity was

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[40]Ibid., pp. 106, 165-6. LaLande, *Little Applegate*, has also interpreted this information in some detail.

[41]Ibid., pp. 167-8.

[42]August 21, 1903.

[43]J. B. Leiberg, *Cascade Range and Ashland Forest Reserves*, 1899-1900, p. 279.

clearly not a major cause of Applegate fires. The Star Ranger station reported in same year that camping was not frequent in the district, since so much of the country afforded little shade.[44]

Hunters also started their share of fires. A 1913 report from the Star Ranger Station accused hunters of using their tobacco and matches recklessly because they "would rather see the brush areas burned out to afford better hunting."[45] John and Marguerite Black, in interview, confirmed that well into their own lifetimes hunters would set fire to the landscape at the end of the year's hunt, in order to clear underbrush for the following year's hunt. In his 1900 study of the Cascade Reserves, John Leiberg suggested that hunters might not have waited until the end of their hunt to start fires:

> Fires are often set to attract game. The larger varieties of game are now becoming scarce in the region south of the Umpqua watershed. During the fall and late summer fires are started to attract game to the smoke and save the trouble of hunting it very far from home. Deer, for example, are readily attracted to the proximity of fire and smoke. They stand in the smoke to escape the attack of flies and gnats, which are very troublesome at certain seasons of the year. Several fires started for the purpose of luring deer were observed during the summer.[46]

The one he cites was in the Cascades, but it is likely that Applegate and Illinois Valley hunters used fire similarly.

Probably the leading cause of incendiary fire in the Applegate and Illinois Valleys by the beginning of this century, however, was rangeland management by stockmen. Will Steel, an early Oregon advocate for federal forest protection, blamed sheepherders for burning private forestland, with the owners' consent, so "that more pasture might be had for their sheep. Sharp hooves of great numbers of sheep totally destroyed light vegetation such as grass, flowers, and small brush, thus leaving the ground totally barren. It was then forsaken by the flocks and new pastures sought."[47] Burning forests down meant opening up new pastureland for their herds.

In the Applegate region, brush tended to grow up rapidly in thick patches on open hillsides where the settlers were accustomed to grazing their sheep, cattle and horses. Leiberg suggested that, in the middle and lower elevations, southern Oregon brush species like hazel, mountain mahogany, scrub oak and ceanothus, that tended to invade after a forest fire, were especially relished by cattle.[48] He described stockmen as burning forests to stimulate this growth. Anecdotal accounts from the Applegate Valley, however, indicate undying hostility to endemic growths of brush, and no reports exist of cattlemen burning forests for the stated purpose of stimulating brush growth, even though that may have been fire's effect.

It is possible to harmonize these accounts, perhaps, if we assume that ranchers knew the younger brush shoots of the first years after a fire were, along with the surrounding grass, adequate forage for their livestock, but that after a few years' growth, the brush was too thick and gnarly to be anything but a nuisance and, if it were allowed to grow unchecked, a future fire in the making. This may have led them to burn existing brush and start the cycle over every few years. Whatever the reason, the stock-raisers who represented the backbone of Applegate Valley residents were quite accustomed to torching off large sections of their landscape annually.

In 1916, Forest Examiner Harold Foster noticed the problem: "In the Little Applegate watershed, . . . there is a wagon road running 15 miles up the river-valley lands supporting a thickly settled community. The region is accessible, but the prevalent brush is a fire menace and the settlers are

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[44]Brown, *Rogue River*, I, p. 142.

[45]Ibid., p. 142.

[46]Leiberg, *Reserves*, p. 279.

[47]Brown, *Rogue River*, I, pp. 13-14.

[48]Leiberg, *Reserves*, p. 279.

not entirely favorable to Forest Service protection of the brush areas. In his report on the Big Applegate drainage, Foster reiterated this point: "The sentiment of the community is in general unfavorable toward fire protection of the brush-covered areas."[49]

So the early rangers knew full well that they were not operating in a friendly environment. Forest Service reports from the years after 1910 often include short, cryptic comments such as "there is no cooperation" or "public sentiment is about half and half."[50] The prevailing climate of opinion required, then, that rangers wage an ongoing propaganda campaign to convince residents and other visitors to the Applegate that fire was a dangerous, destructive enemy, not a management tool.

"To stop the annual ravages of fires is a matter that is hard to do."

The summer of 1910, as noted above, was a particularly severe fire season and unusually dry; a Forest Service report written in 1939 designates that year as the worst season up to 1939 on the Rogue River National Forest. Many of the fires, it noted, "were attributed to the carelessness of hunters and campers, while a considerable number were the result of malicious intent." Most of the largest fires were in the Cascades, although major fires were also fought in Anderson and Wagner Creeks, just over the divide from the Applegate. During that season, fires burned over 69,000 acres of Crater forestland. [51]

The 1910 season galvanized federal forest managers. Increasingly after that year, when Forest Service personnel were not actively fighting fires they were fighting residents' nonchalance about, tolerance for, or outright devotion to fire. The daily journals of John Gribble, who traveled the Applegate region extensively during these years as District #6 ranger, reflect this preoccupation with fire, especially during the summer months. He receives fire reports and either lets the fire burn (e.g., a September, 1916 fire on the southwest side of Mt. Ashland where, he says, it can't do any harm, it's just thick brush up there) or he recruits help to put it out. He checks a fire line and notices two fire-fighters sitting by a campfire, then sees where they have hastily camouflaged another fire that he believes they have just set outside the fire line; he arrests them on suspicion of arson. He posts fire warnings along the Siskiyou ridges. He adds cautionary notes to hunting notices: "Open Season Buck Deer, Aug. 15 to Oct 31 - P.S. Be Careful with Fires." He and his wife Marion post fire prevention signs at campgrounds. He fights a fire on Forest Creek: "phoned Cap Ruch to send tools and men." He patrols the Applegate area, investigates alleged fire-starters, urges people to put their fires out, writes citations if they refuse. He goes up Dutch Gulch to talk flood drains with Charles Johnson, and posts fire notices on the way. He visits with the "Lewis boy" who is grazing sheep: "Talked some time with him and warned him to carry a shovel when herding sheep and to be careful about fires." He patrols on Wagner Butte and notices where six fires had been started near a corral. He finds a fire south of Whisky Peak at the stockmen's cabin and phones Coleman and Spencer to send twelve men each to put it out.[52]

As Gribble's notebooks illustrate, whatever else rangers were doing, they were also doing fire prevention. Their persuasive arsenals contained a number of arguments that they would try out on local residents and visitors to the forests. Only when these failed would the rangers resort to a variety of more coercive measures: regulatory pressures, warnings, citations, criminal prosecutions. The carrot and the stick. But clearly they preferred the carrot in their campaign to decrease fire's freedom to roam the landscape unscathed.

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[49]Brown, *Rogue River*, I, pp. 165-6, 168.

[50]Ibid., p. 142. From reports on Districts 6 and 7.

[51]"General National Forest Information," Rogue River National Forest, March, 1939, p. 10.

[52]John Gribble Work Diaries, entries for: 9-24-16, 7-18-10, 8-31-16, 8-16-16, 8-20-16, 7-28-11, 7-19-11, 5-27-09, 5-13-12, 11-3-15, 10-21-15. Unpublished original manuscripts held at Southern Oregon Historical Society, Medford.

One way to persuade local residents not to fry their own landscape was to sound the alarm of future timber shortages. Fire destroyed "millions of feet of the best timber in the world . . . with no effort to save it, so that in a few years there would be none left for commercial purposes." They argued that brush fields were really an early stage of forest development. Fires would kill the young timber that grows up through the dense brush.[53] John Gribble spent some time in November, 1916, persuading a brush-clearing party over in the Ashland watershed to try to save the young trees by chopping the brush down rather than burning it out.[54]

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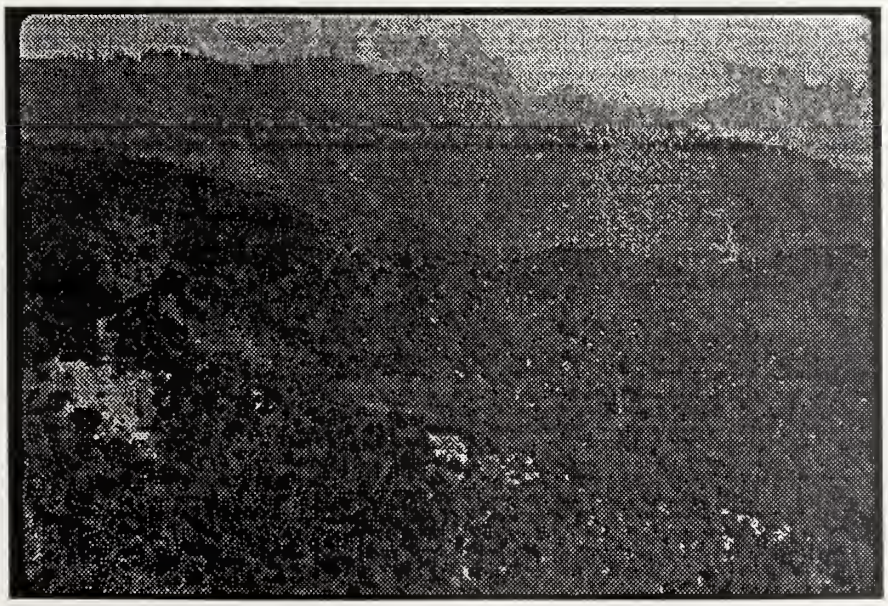
[53]Brown, *Rogue River*, I, pp. 13, 142.
[54]Gribble, 11-14-16.



Upholding with the idea that unrestrained fire promised to bring future timber shortage, was the notion that fire acted to "deplete" the forest. This series of photos from the *Ecological Survey of Brush Areas, Applegate Division, Crater National Forest* (November 1916), explicates this process. The first photo shows the "first phase of forest depletion," in which large conifers remain in the area. The second photo shows the "second phase," in which a diminished number of large conifers remain scattered across a burned area. The third photo shows "the last cycle of depletion", in which few conifers at all remain

The timber-preservation argument made sense to the editor of the Jacksonville Sentinel, who echoed it in an editorial.

> The smoke now filling the air and car after car of lumber that is being shipped from this Valley, indicate that the fire and the logger are each doing their full part to denude the hills of Southern Oregon of their forests. The time is not too distant when the hills of the Rogue river valley will all be barren, bleak wastes unless a more sensible policy of forest preservation is inaugurated. To stop the work of the logger is not possible for timber is required in the industrial development of the country, but the wanton waste by fire could be stopped and nature be given an even show to reforest the hills.[55]

Although the notion of "forest depletion" due fire may have swayed public opinion, it is likely that ecologists today would take a different angle on the role of fire in the forest ecosystem. Today, it is often fire's absence—not its presence—which is considered a primary threat to forest health.

Forest Service personnel also appealed to the ranchers' heavy dependence on water supplies on a landscape prone to summer droughts. "The country has to be protected because of the water flow," they said. Harold Foster drove the point home in his 1916 report:

> The Big Applegate River valley supports a dense population and much good agricultural land is dependent upon the streams for irrigation water. The brush-covered hillsides exercise a large influence in holding the water from making spring freshets and keeping the streams alive during the dry summer months when irrigation is needed. From that standpoint alone the brush-covered areas are worth protecting.[56]

But, as the Sentinel admitted, "to stop the annual ravages of fires is a matter that is hard to do."[57] Habits of life on the land died hard. Siskiyou National Forest Supervisor M. J. Anderson was clearly aggravated by the ranchers' insistence on setting fires. In his 1909 Grazing Report, he included this paragraph:

> There were numerous small fires started on this district last season and I find this is reported to be a common system of certain stockmen to develope [sic] range, both on and off the Forest in that vicinity. Several fires started off the Forest near the Coast supposed to be set to develope [sic] range and getting beyond control, destroyed much property about September 1st, 1908. The winter range was largely burned over and this may be a lesson to the community; but if it were possible to give the Supervisor authority to forbid grazing on certain burns for a term of two or three years after a fire, it might be the best means of stopping fires in the locality mentioned.

Anderson's superior did not think that such a policy should be undertaken "until it is deemed absolutely necessary."[58]

To help change the minds of Applegate Valley residents about the usefulness of fire, rangers appealed to the pocketbook. Forest Inspector Arthur Ringland analyzed the cost of fire-fighting in the Applegate region in 1916. He figured the Forest Service was paying ten cents an acre to fight fires, with little left over for roads, trails and telephone lines that might improve the lives of Applegate Valley residents. Of course, he recognized that some of the locals benefited personally from fires by being hired by the federal government to fight them.

Ringland reasoned that the people felt the forests produced no present value and possessed doubtful potential value. He recommended cooperative controlled burning on selected sites and the

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[55]August 21, 1903.

[56]Brown, *Rogue River*, I, pp. 142, 167.

[57]August 21, 1903.

[58]Siskiyou National Forest "Grazing Report," January 14, 1909; and "Permits for 1909", January 29, 1909, p.3.

construction of more improvements, such as roads, trails, bridges, and telephone lines as a means of increasing the value of the forests. He also suggested wide publicity, especially of the suggested improvement program, to impress the local people with the fact that fires would prevent the fulfillment of the improvement program. Forest Service historian Brown, notes that the District Forester (today's Regional Forester) "agreed to carry out the improvement program but asked the forester [Ringland] for more time and research on the controlled burning program."[59]

It may well be that by 1916 or so, livestock growers were no longer actively flouting regulations by setting fires for rangeland improvement. One reason may be the expectation, if not requirement, that stockmen holding grazing permits on public land would "volunteer" their efforts to help put fires out. A GLO circular of 1903 put it bluntly:

> It is not only the party who holds the permit in his name who must render service when called upon, but any one employed by the holder of the permit in question, such as herders and packers, etc.... Such stock men are compelled under penalty of having their permits revoked, to assist in extinguishing forest firest when called upon, without compensation.[60]

Perhaps this combination of persuasion and coercion was having its effect by 1916. Whatever the reasoning, Harold Foster could report that

> in the Upper Applegate the stockmen have just recently agreed to do everything possible to keep out the fires, and the stockmen in the lower Big Applegate seem to feel that their grazing interests are not being advanced by the repeated fires and probably will lend their influence to convince people that fires are not a good thing for the community.[61]

Robert Webb, a fire officer who started with the Forest Service in the 1930s, remembers an exception that no doubt proves the rule. "Old" Amos McKee refused to help put out a fire when Lee Port asked him to. In retaliation the following spring, Port wouldn't give him a grazing permit. At first, McKee got a lawyer and tried to fight it, but eventually gave in and agreed that he'd help fight fires in the future. Webb remembers that virtually all the Applegate residents helped out on fires when requested, perhaps encouraged by their ability to earn fire-fighters' wages.[62]

In an interview with Kay Atwood, Carroll Brown, who supervised the Rogue River National Forest from 1957 to 1967, offered his judgment that the relationship between the Forest Service and the Applegate Valley "natives" had, "with a few exceptions," been "excellent."

> At one time, the Applegate was noted for its arson-caused fires, and it has taken quite a lot of education to break them of the habit. It was mainly for stock grazers. Brush is so thick out there in places that cattle can't even get to it. They would burn it to make better grazing land. After a fire, the grass comes in pretty good, and it would make a lot better forage. We didn't have that problem at all while I was here. It had cleared up years before.[63]

Fires continued to burn throughout the period, of course. The worst fire years on the Crater/Rogue River National Forest were 1917, 1918 and 1931. But the gradual combination of "a lot of education" and more effective technical measures lessened the extent of fire's impact on the Applegate and Illinois ecosystems. The Forest Service threw increasing numbers of personnel hours, roads and trails, telephone links, lookouts (four in the Applegate by 1921: Tallowbox,

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[59]Brown, *Rogue River*, I, p. 173.

[60]Ibid., p. 40.

[61]Ibid., p. 168.

[62]*Recollections: People and the Forest*. Oral History Interviews, II, The Applegate Valley and Siskiyou Mountains (Medford, OR: Rogue River National Forest, 1990), p. 10.

[63]*Recollections: People and the Forest*. Oral History Interviews, November 1980, Kay Atwood, ed. (U.S.D.S. Forest Service, Pacific Northwest Region, Rogue River National Forest), no page numbers.

Yellowjacket, Wagner Butte and Whisky Peak), and fire-fighting techniques into the battle against fire.[64] Most fires were caught early and extinguished before major conflagrations could break out. By 1939, the Rogue River National Forest could report that, forest-wide, just over a hundred forest fires broke out, on average, each year, but three-quarters of them were lightning-caused, and of the other quarter, most were accidental. Only three were classified as incendiary.[65]

The exceptions to this trend were still quite damaging. A fire on Palmer Creek in 1915, set by arsonists, destroyed about a thousand acres.[66] John and Marguerite Black speak of major fires in the Humbug and China Gulch area in 1931. "Two large ranches were burned" by "a disastrous fire" that "destroyed forests of pine and fir timber." Their book includes a photo of a group of Applegate residents in front of the Applegate Store in 1931, with the caption: "There was a Grange project for reseeding grass following the Humbug Creek and China Gulch forest fires." Eventually, they tell us, trees and brush grew back and today "the old ranches are subdivided and there are many rural residences along the creek."[67]

We have no evidence that the controlled burning recommended by an early district forester did occur on any regular basis during these years. By 1939, the Rogue River National Forest had settled on a policy generally hostile to controlled, or "light," burning. It described its policy to the public in this way:

> To secure the results which the "light burners" desire, that is a "clean burn," the forest cover and ground litter must be so dry that any fire set will destroy not only the ground litter but all of the small trees and reproduction which forms the basis of the future forest. The Forest Service has proved that in the long run fire prevention and not "light burning" is the best system for protecting and conserving our forest resources. Light burning destroys reproduction, attracts insects, depletes forest soil and destroys forage.[68]

We said the impact of fire in the study area was gradually lessened beginning in the early part of this century. We could also say it this way: the impact of the suppression of fire on the landscape was gradually heightened, beginning early in this century and continuing through the period. LaLande points to the suppression of fire in these years as the key event in the shaping of vegetation patterns on the landscape of the Little Applegate Valley.[69] The same might be said for much of our study area.

Suppressing Livestock

"Unwarranted interference with their rights."

Lighting fires, for a variety of purposes, was one of those popular traditions of landscape management that long pre-dated the arrival of the new breed of federal land managers in the study area at the turn of the century. It had time and custom and folk wisdom and intimate experience of the land on its side. It would take quite a few years for Applegate and Illinois Valley residents to believe that the fresh young rangers who questioned it were anything more than over-educated,

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[64]Brown, *Rogue River*, I, p. 207.

[65]*General National Forest Information*, pp. 9-10.

[66]Brown, *Rogue River*, I, p. 168.

[67]Black and Black, *Ruch*, pp. 163, 158.

[68]*General National Forest Information*, p. 11.

[69]LaLande, *Little Applegate*, pp. 82-3.

naive outsiders with a lot to learn about life in southern Oregon. There are some, perhaps, who are still unpersuaded.

The Forest Service invoked precisely the same response when it announced its intention to control livestock grazing on the national forests. It entered an uphill battle against local custom that would continue to the present moment.

Grazing issues were already on the horizon, and soon tangled with politics, in the inaugural days of the forest reserve system. Soon after President Cleveland's proclamation of the Cascade Range Forest Reserve in 1893, sheep grazers from eastern Oregon, "who had always had free pasture for their flocks" and "bitterly resented what seemed to them an unwarranted interference with their rights" organized to get the reserves "restored to the market." Quite a bit of money seems to have been expended over a period of years in the mid-1890s, without success, lobbying Congress to roll back the reserve system.[70]

It was probably no accident that the sheep raisers, not the cattle raisers, led the opposition to the establishment of forest reserves. Sheep were understood to inflict greater damage on the environment than cattle, and their reputation in the 1890s was at an all-time low among conservationists. Will Steel, an early advocate of forest conservation in Oregon, quoted with approval John Muir's characterization of sheep as the "hoofed locusts" of grazing lands.[71]

In a letter to the *Oregonian* in November, 1893, Steel laid out the case against sheep in the national forests. He showed an early sensitivity to soil compaction as well, quoting a recent scholarly paper on forest deterioration:

> The first step in the process of denudation of trees, is cutting and taking away of valuable parts of the timber, leaving tops of trees, chips, and useless parts upon the ground which, after becoming dry, burn rapidly and fiercely whenever, by the carelessness of some hunter or camper, fire gets started and sweeping fire destroys the life of the undergrowth. After the next rain following the fire, vegetation starts up and among it numerous seedling trees in Nature's attempt at reforestation. But with the spring season great flocks of sheep are driven upon the recently burned-over lands, which not only eat the herbage but also nip off close to the ground and destroy the seedling trees and the sharp hooves of the sheep tramp the ground until it becomes very compact on the surface; and after a few seasons of that kind of treatment the soil becomes packed too hard for seeds to germinate in it, or for the winter rains to penetrate.[72]

Sheep grazers were not wrong, then, in sensing that they would be the biggest losers if the forest reserve system became permanent. Many of Gifford Pinchot's earliest regulations and cautions had to do with grazing. For a time, grazing was entirely prohibited on all but the Washington and Oregon reserves, where adequate vegetation was thought to exist. Sheep and sheep men found particular disfavor among the first generation of managers. With an attempt at humor, one manager summarized his operating orders this way: "If you meet a sheep-herding so-and-so on the trail with a broken leg, break the other leg and go on."[73]

Soon after the turn of the century, Pinchot set in motion a series of studies, under Albert Potter, to determine proper rangeland conservation. From Potter's research, including interviews with fourteen hundred stockmen who were said to support "reasonable" regulations to avoid overgrazing, grew a federal grazing management policy based on these principles: "(1) proper use

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[70]Will Steel letter to the *Oregonian*, November 25, 1893, in Brown, *Rogue River*, I, pp. 13-14.
[71]Ibid., p. 14.
[72]Ibid., p. 19
[73]Steen, *Forest Service*, p. 66.

will be allowed, (2) carrying capacity of range will determine allotment size, (3) permits will be granted equitably, and (4) the regulations will be flexible."[74]

Moderate as these principles may seem, they struck contemporary stockmen's ears as an unwarranted power grab. In several court cases, stockmen contested the Forest Service's right to restrict numbers and require permits on land that they had considered theirs to use as they pleased. When one court ruled against the regulators, stock raisers in Washington, California and Arizona (strangely, Oregon is not mentioned) inundated the forests with sheep. The result weakened their own cause: "Not only did the sheep destroy the grass by cropping it to the roots, but they also killed the young trees by stripping them of their foliage."[75] Eventually, the Supreme Court upheld the Forest Service's authority to regulate the range. That settled the matter as a legal issue, although battles with local stock raisers would continue for many years.[76]

In 1939, when the Forest Service explained the need for its grazing permit system to the public, it placed itself on the side of the "little guy" versus the large livestock interests. Before the Forest Service began regulating grazing, it said, "the range had been controlled by a few large stock owners, not local residents, whose policy was to crowd the small local owner off the land." The large owners had successfully done this, according to the Forest Service, so that "as far as the local owner was concerned, it was problematical at the opening of the grazing season whether he would be able to find range for his stock." The Forest Service permit system guaranteed that the local owner would be given first dibs on the local range.[77]

In one way, at least, things seemed to work out that way in the Applegate Valley. The largest southern Oregon sheep interests were based in the upper Bear Creek valley near Ashland, across the divide from the Applegate drainage. Yet, their sheep dominated much of the range around the headwaters of the Little Applegate and Applegate Rivers. The arrival of Forest Service management in the Applegate region would begin a process of gradually restricting the numbers and geographic extent of sheep in the Siskiyou Mountains, opening it to greater opportunities for the cattle ranches that dotted the Applegate and Illinois Valleys.

"Cattlemen are just a bit averse to the advice of 'upstarts' not in the business."

The earliest managers of the Cascade Forest Reserve seem to have understood the historic deterioration of rangelands caused by livestock, especially sheep. Systematically, they began reducing the numbers of sheep permitted to graze on the federal forests. The earliest figures, for 1903, show 103,000 sheep permitted to graze south of the Umpqua divide in the Cascade Forest Reserve. According to the supervisor's notes, permits were being requested for another 50,000 sheep, which probably means that 103,000 was already well below historic numbers.

After 1903, the numbers gradually decline. By 1907, only 50,000 sheep permits were authorized. By 1909, there was a major dip to 7,000 permits. And by 1911, sheep permits fell to around 5,000. Spot checks show numbers of sheep permits staying around 5,000 through the mid-1920s. The 1929 figure is up to 8,000, the 1939 figure up again to 10,000, and then the 1941 figure is down to 6,200. It is unclear whether these later fluctuations represent public pressures, market conditions, rangers' judgments as to the health of the range, or some combination of these.[78]

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[74]Ibid., p. 67.

[75]Ashland *Tidings*, March 5, 1903.

[76]Steen, *Forest Service*, pp. 87-89.

[77]*General National Forest Information*, p. 12.

[78]Brown, *Rogue River*, I, pp. 42, 62, 98, 110-11, 177, 232, 251; E. H. MacDaniels, "Twenty-Five National Forests of the North Pacific Region," *Oregon Historical Quarterly*, XLII (March-December, 1941), p. 255; *General National Forest Information*, p. 11. Numbers rounded.

It does seem clear that the Applegate region saw less grazing than other portions of the Crater National Forest, such as the Dead Indian plateau, where grazing work occupied fully half of the District Ranger's time.[79] Still, grazing accounted for the single most significant resource use on the Applegate portion of the National Forest during the first half of the century. Sheep raisers based in the Bear Creek Valley, like the Herrins and the Beesons, grazed huge bands of sheep in the high ranges behind Mount Ashland, especially the McDonald Creek area, at the turn of the century.[80] A 1907 report from the Ashland National Forest identifies Herrin and Son as the region's primary sheep grower. He was said to have grazed 2,000 sheep annually on public lands for the previous twenty-three years. The report implies that permits for these sheep were granted by the Forest Service for 1907 (when Crater Forest sheep permits as a whole totaled 5,000) and again for 1908.

On the other hand, of the 5,000 or so sheep permits granted on the Crater National Forest in 1914, records show only 200 of them granted in the Ashland/Little Applegate drainages, none in the Big Applegate. This is probably an incomplete report. By 1917, the Ashland/Little Applegate drainages account for 3,200 -- still none in the Big Applegate. In 1919, District #5 (which includes the Ashland, Little Applegate and Big Applegate drainages) shows 2,400 sheep and goat permits, and the 1923 figure stays exactly the same.

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[79]Brown, *Rogue River*, I, p. 127.

[80]LaLande, *Prehistory and History*, p. 85.

Their impact and numbers significant, here sheep graze the Applegate Valley in a photo from the *Examination of Goat Ranges on the Crater National Forest, October 1917.*

These figures may lack some precision, due to changing jurisdictions and accounting methods, but they offer a general picture of the level of livestock access to federal forest lands in the Applegate during the first quarter of the twentieth century.[81]

LaLande reports that around 1920, a Medford livery turned its horses out to die in the Upper Applegate. They thrived, and soon the "Wild Horses of the Applegate" were "raiding haystack and pastures, kicking calves to death, knocking down fences and ruining summer ranges" in the Elliott Creek country.[82] This herd, which was finally destroyed as a nuisance by local stockmen by the late '40s, was probably not included in cattle and horse permits for the period. These rose in proportion to sheep permits, but in constant numbers were relatively stable throughout the period. Cattle and horse permits fluctuated from 2,300 (1912) to 4,100 (1917) to 4,000 (1919) to 3,500 (1923). [83]

Grazing seems always to have been less important on the Siskiyou National Forest than on the Crater National Forest. (During the contemporary period, this trend has perhaps changed, as the Illinois Valley has emerged as the major stock district of the Siskiyou National Forest.)[84] The earliest records for the Siskiyou National Forest show 1671 cattle, 597 sheep and 600 goats being grazed during the 1908 season. The largest number of these (536 cattle, 550 sheep) were grazed in District 6 which is not identified in the document, although the report of range conditions there mentions a coastal area, which makes it seem to be outside our study area. The 1910 Grazing Report mentions that sheep grazing was "almost exclusively confined to the coast slope near the headwaters of Chetco and Pistol rivers."[85]

Since the range on the Siskiyou National Forest was showing "no apparent damage of injury to reproduction or erosion from the cutting of the loose soil by trampling" during these early years, permit authorizations were generally set at between 3,300 and 4,000 head of cattle and horses and between 2,200 and 3,200 head of sheep and goats.[86] The summer grazing season ordinarily began May 1 and ended October 31, although if the rancher wished to pay a higher rate (40 cents per head on cattle as opposed to 25 cents), he was allowed a yearlong grazing period.[87]

The earliest records that allow us to identify geographical areas appear in 1912. These indicate that by that year the largest number of head in the Siskiyou National Forest were being authorized on Grazing District #6, which covered most of the Josephine County portion of our study area: Williams, Murphy, Deer, Sucker, and Rough and Ready Creeks and the Upper Illinois River. The Sucker Creek Range had the largest authorizations in District #6 as well as on the entire Siskiyou National Forest: 650 head of cattle and horses. Next came the Upper Illinois River: 300 cattle and horses. The Williams Creek Range authorized 180 head of cattle and horses. Deer Creek, Murphy Creek and Rough and Ready Creek authorized only 80, 60 and 30 head respectively. The Rough and Ready Range was the only one in this district to authorize sheep: 300 head in all. District #4 also included portions on the northwestern edge of our study area: Slate Creek, Squaw Creek, Eight Dollar Mountain, Josephine Creek and the Illinois River Range. The total head of cattle and horses authorized there in 1912 was 775, and the district included no sheep grazing. On the whole Siskiyou National Forest, 4,000 head of cattle and horses and 2,500 head of sheep were

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[81] Brown, *Rogue River*, I, pp. 71, 176, 196, 200, 220. Numbers rounded.

[82] Medford *Mail Tribune*, November 23, 1947, in LaLande, *Prehistory and History*, p. 85.

[83] Brown, Rogue River, I, pp. 71, 176, 196, 200, 220. Numbers rounded.

[84] LaLande, personal communication.

[85] Siskiyou National Forest "Annual Grazing Report," December 17, 1910, p.2.

[86] See, for example, Siskiyou National Forest "Grazing Report," January 8, 1910, p.3; "Permits for 1911", December 19, 1910, p.1; "Permits for 1912," December 27, 1911.

[87] Siskiyou National Forest, "Permits for 1909," January 29, 1909, p.1.

authorized. Yet, only 1,788 and 1,025, respectively, were actually grazed. This pattern of fewer head grazed than authorized continued for at least several years.[88]

Evaluating the condition of rangeland and issuing the appropriate number of permits was perhaps the easiest part of administering the Forest Service's grazing program. The hardest was enforcement. A note in a 1907 Ashland National Forest grazing report symbolizes an ongoing problem: "Permitted 600 cattle, actually grazed 1,000 cattle."[89] Ranger John Gribble kept busy posting "Closed to Grazing" signs (especially on the boundaries of the Ashland watershed, which was declared off-limits to livestock to protect Ashland's drinking water), reprimanding stockmen for ignoring grazing regulations, attending stockmen's meetings to encourage cooperation among them, and organizing drift-fence projects.[90] Forest Service records indicate that rangers continually needed to prod stockmen to move their cattle from worn rangeland, keep them dispersed over the range, distribute salt blocks, fix fences, and honor the dates established for releasing and rounding up the cows.[91]

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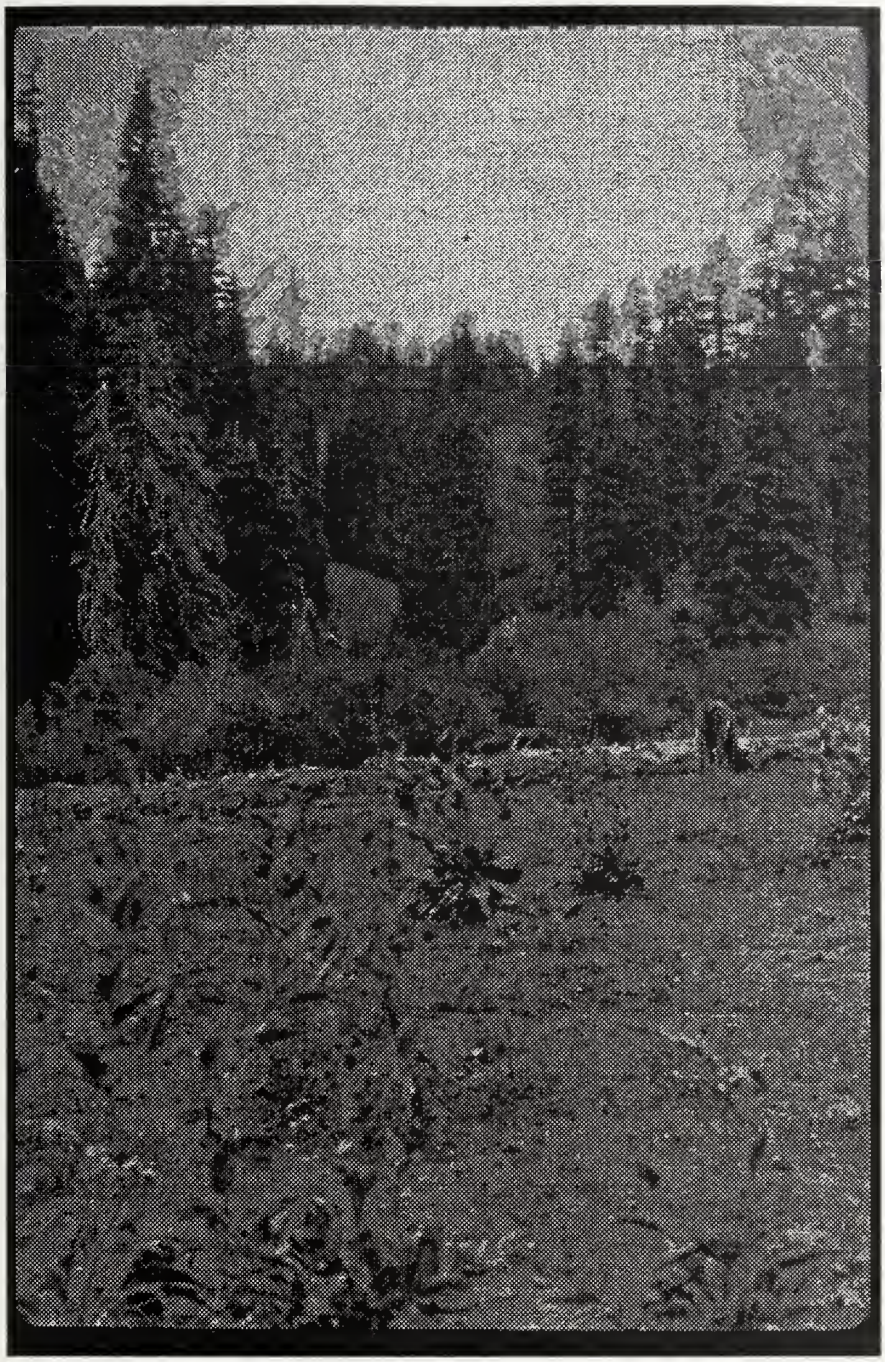
[88]Siskiyou National Forest, "Permits for 1912," February 9, 1912. This document also includes the names of every permittee on each range in each district. On the Upper Illinois River Range, for example, these family names appear: Sowell, George and Lind, of Kerby; McBriety and King, of Takilma; McClay, Chamberlain and Beer, of Waldo; and J. E. Holland of Holland. The Sucker Creek Range includes twelve different ranching families, half of whose residences are listed as Holland, including Garner, Grimmett, Lewis, Porter, Trefethen, and Wisecarver. The rest of the Sucker Creek Range families are from Williams (Albert Bigelow, and C.O. Bigelow), Murphy (Russell & York, and Knox), Kerby (Briggs), and Provolt (Spencer). On the Williams Creek Range, permits were listed in the following family names: Bigelow, Carl, Farea, Kincaid, Moomaw, Provolt and Vineyard, all of either Murphy or Williams.

[89]Brown, *Rogue River*, I, p. 171.

[90]Gribble, entries for 8-31-16, 2-25-16, 2-26-16, 4-9-15, 5-12-09.

[91]Brown, *Rogue River*, I, pp. 179-80.



Forest Service records indicate that rangers continually needed to prod stockmen to move cattle from worn rangeland. Ranger Gribble likely encountered vistas such as this overgrazed range in the vicinity of Bigelow Cabin, at the headwaters of the Sturgis Fork. This photo is from the *Report of Grazing Conditions on Grayback Interforest Cattle Range.* It was taken September 13, 1922.

It seems that Ranger Gribble also spent a good deal of time counting cows. On February 27, 1916, Gribble stopped for the night in the Little Applegate Valley and stood for a while next to Arthur Kleinhammer's fence, counting every one of his 408 head of cattle. The following year, in January, Gribble decided he would count all the cattle in the Applegate region. He counted only 248 in Kleinhammer's field this time, but couldn't get a complete count because the cows stampeded into the timber. On that same visit to the Applegate Valley, he counted 103 head plus 20 calves at the Cameron place, around 50 head at Saltmarsh's, 142 at the Cantralls', 131 near the house and 230 in the upper field at the Cantrall/Newbury place, and 122 at the Buckleys', plus assorted numbers at smaller ranches. His work diaries indicate that he returned to certain properties several times over the course of a few days to confirm or revise his count. On his second visit to the Frank Cameron place, for example, he counted an additional eight head plus five calves. His total count comes up just short of 2,000 cows.[92]

When Gribble counted cows, he was of course thinking of how to find a match between the coming season's livestock permits, the actual number of head for which ranchers would seek permits, and the condition of the summer range at the higher elevations of the Siskiyou Mountains. The fact that he had to count them himself probably indicates that he could not rely on the ranchers to give him accurate counts. Often, his diary shows him comparing the numbers of permits a particular rancher applied for with the number of cows he counted in the same rancher's field.

From Gribble's diary we know, as well, that when he was counting cows in January, 1917, he knew he would soon be facing opposition from the stockmen in the Applegate region. He was planning to lower the number of permits issued for the coming grazing season, and perhaps anticipated that he ought to have his own headcount since he would doubtless find himself adjudicating competing claims between cattlemen. In his diary, he describes a conversation with his supervisor.

> He said I would probably find considerable discontent among stock men on account of the necessary cut in cattle. But he thought it was due to small owners having the idea that large owners are given advantages and not knowing that cuts first affect non residents, renters and those buying hay and large owners.[93]

One of the reasons small owners may have felt discriminated against was the Forest Service's practice of basing permit numbers partly on the amount of acreage the rancher owned. The theory was that if the rancher were permitted more cows than he could winter on his own pastures or cropland, he might be tempted to turn them out too early in the spring or leave them out too late in the fall. Forest Service documents from this period do mention these as common infractions, with serious harm to both the summer and the lower-elevation winter ranges. A 1910 Forest Service report reflected this problem:

> Stock entered the forest in poor condition. . . . About 25% of the stock which came off the summer range never receive any hay during the winter. They are turned loose on the exposed foothills to shift for themselves. The foothill range has for the past 20 years been overstocked, and consequently the cattle that receive no attention during the winter come out in the spring in exceedingly poor condition. If there is no more than 25% loss, some of the stockmen consider their stock have passed the winter successfully.[94]

The 1915 grazing report on the Crater Forest sounds a similar note: "Severe drought dried up the foothill range causing the stock to remain on the National Forest range about a month or six weeks longer than usual."[95]

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[92]Gribble, entries for 2-27-16, 1-20-17, 1-24-17, 1-27-17.

[93]Gribble, 1-17-17.

[94]Brown, *Rogue River*, I, p. 111.

[95]Brown, *Rogue River*, I, p. 178.

One of the Applegate area ranchers caught with too little private acreage to support his desired numbers of permits was Charley Dunford. Charley's family originally owned 240 acres on upper Poormans Creek. Sometimes around 1912, after his parents died, Charley bought ten acres on the Little Applegate River from Frank Crump. John and Marguerite Black tell his story:

> He had a few cattle at first and gradually built up his herd. He ran his cattle with Kleinhammer, Saltmarsh and others on the high range under the Forest Service permit system. Because his home ranch was so small, the Forest Service officials put a limit on the number of cattle allowed on his permit. He was very angry about this. His first reaction was to purchase a 320-acre ranch about a mile up Yale Creek which gave him the required acreage for his range permit. The ranch was purchased from Mary Pursel in 1939. He lived by himself in the big ranch house.

From the stories told of him, Charley was quite a character. He was known for his frugality, refused to buy an automobile and never learned to drive, and wouldn't use the electric lights in his own house. He died at 86 in 1970. If we could interview him, we'd probably meet a man who typifies those of the Applegate Valley ranching community that had little use for the federal land managers.[96]

Crater National Forest grazing reports of the period after 1910 reflect the difficulty of enlisting ranchers like Charley to cooperate either with the range management program or with one another. Usually, comments are restricted to a single laconic line: e.g., "Seems impossible to form associations or to run the cattle on common use within an allotment."[97] But the 1910 report waxes a bit more eloquent.

> The lack of community interest among the stockmen is very noticeable and this same condition has existed ever since grazing in this section of the country began. No cooperation, except by one or two individuals prevails anywhere among users of the Forest. An attempt was made last year to get them to cooperate in buying salt and hiring riders, but it was impossible.[98]

This kind of public resistance took its toll on rangers' morale, which was showing signs of wear in the mid-1910s. The Crater Forest's 1916 "Grazing Notes" hint at what was doubtless a deeply felt problem.

> Stock are generally turned out and drift to their summer range. Salting is done where convenient, at watering places, open areas along roads, or wherever the stockmen find a gathering of cattle. Most of the rangers recommended better salting plans to get better distribution of stock throughout the range. Many unused areas were noted and the rangers recognized the need for better salt distribution to these unused areas. Very little herding was done on the range.
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> Several of the rangers recognized their inability as range experts. One ranger recommended meeting to discuss proper range management, with an expert in this field. They tried to look after the range but with an active fire season the range inspection was sadly neglected. . . .

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[96]Black and Black, *Ruch*, p. 103.

[97]Brown, *Rogue River*, I, p. 178.

[98]Ibid., p. 111.

This report quotes a ranger not stationed in the Applegate District as saying that his grazing program "is a polyglot, without definite beginning or ending or fixed parts." The same ranger adds:

> Sometimes [I meet] a cowboy who seems rather shy and diffident or apathetic or distant or unapproachable or something like. It seems to an apprehensive person that cattlemen are just a bit averse to the advice of 'upstarts' not in the business.[99]

Morale also seems to have been affected by the fact that budgetary constraints continued to dictate priorities other than grazing. In 1917, the Crater Forest grazing report noted that reconnaissance was "badly needed on Applegate. . . . Some has been done in connection with timber reconnaissance but money should be allotted for this purpose." In 1919, Crater Forest Supervisor Hugh Rankin requested that he be assigned an assistant to place in charge of the grazing program.

> Grazing capacity is not accurately known and study needs to be made of this phase of grazing. Large acreage of O & C lands within the Forest should be properly grazed. The rangers spend so much time on fire matters they cannot devote much time for grazing.[100]

"Art would organize the drive"

There is some evidence that the Forest Service gradually made progress in inducing the Applegate area ranchers to cooperate both with the grazing program and with one another. Siskiyou Forest Supervisor M. J. Anderson reported that the stockmen grazing on his forest were "friendly" to the grazing program in 1909.[101] On the Crater Forest, early in 1908 a dozen Applegate River and Wagner Creek cattlemen and the leading area sheep-grower, Fred Herrin, met in Talent with Forest Service personnel to discuss their use of the federal rangelands for the coming summer. According to the Ashland Tidings' report of the meeting, "there was not a hitch as far as harmony between the stockmen was concerned and it is assured that all, including the Herrins, will get the range they have been using for years now covered by reserve. Lines are to be drawn, however, and the sheep confined strictly to their own territory."[102]

This article's subtext could well be that the Herrin family was nervous about maintaining its range, given the growing reputation of sheep as destroyers of the public land, and that cattlemen were beginning to take advantage of this reputation to push for an enlargement of their own range. Whatever the truth of the "harmony between stockmen," such conferring was doubtless a step toward the kind of cooperation the Forest Service was looking for.[103]

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[99]Ibid., pp. 179-80.

[100]Ibid., pp. 190, 200.

[101]Siskiyou National Forest, "Grazing Report," January 8, 1909, p. 4.

[102]Brown, *Rogue River*, I, p. 172.

[103]Early experience with stockmen's associations in the Siskiyou National Forest had a somewhat different flavor. Forest Supervisor M. J. Anderson reported in his 1910 Grazing Report that the local livestock association had not met during the previous year. "In fact," he wrote, "its main excuse for existance [sic] in the first place seems to have been to protect against the organization of the Forest and regulations of grazing and as its members are friendly now there is little to discuss." (Siskiyou National Forest, "Grazing Report," January 8, 1910, p. 3) A few years later, his successor R. L. Fromme seemed relieved to be able to report that "there has been no revival of the Live Stock Association which started up in this locality a few years ago" which meant that "for all practical purposes it may be considered as dead." (Siskiyou National Forest, "Annual Grazing Report," December 11, 1911, p.6.)

The 1915 establishment of both an Upper Big Applegate Stock Association and a Lower Applegate Stockmen's Association, under the prodding of the Forest Service, points to a higher degree of cooperation in the Applegate region than the Forest Service was able to achieve on its Cascade Range lands. After 1917, Crater National Forest grazing reports begin more frequently to include lines like these:

> Associations are helpful by adopting special salt rules.
>
> Associations have been very helpful by adopting special rules for handling stock, particularly salting.[104]

On the other hand, change did not come quickly or uniformly. In 1917, the Crater National Forest reported that

> Stock Associations are slowly working for better range management but results are spotty. Some stockmen complain that more frequent salting scatters the stock and causes more riding. Usually they are too busy at the home ranch to ride as they should.[105]

At the end of 1919, the Crater National Forest reported its range having been "grazed very sporadically, parts of it overgrazed, and parts not at all." The cause: "improper management in salting on the part of the owners." In 1925, Supervisor Rankin noticed that stock associations "were not as cooperative during the past few years as they were previously."[106]

One of the stockmen in attendance at the 1908 meeting in Talent was Arthur Kleinhammer. He was named to a committee of three charged with establishing that year's range allotments, and seems to have taken the lead in bringing at least a minimal level of cooperation to the ranching community in the Applegate. Kleinhammer's father, Claus, had come to the Sterling mines in 1853 and done well for himself. His son Arthur, as a 29-year-old, bought a 160-acre homestead in the Applegate, then, with "big plans to expand his ranching and cattle raising business," he purchased "490 acres of the best farmland on the Little Applegate River, complete with water rights." His property lay along three miles of the Little Applegate between Buncom and the Saltmarsh property. From then until he and his wife Mary lost their ranch to creditors in 1925, Arthur was "the leading cattleman of the Little Applegate area and became a legend in his own time.[107]

John and Marguerite Black tell us that Arthur Kleinhammer ran up to five hundred head of cattle on his ranch and on the high ranges of the Little Applegate under permits from the Forest Service. He was a man with standards: "He insisted that everything be done his way." This trait didn't seem to stand in the way of his leadership of the Little Applegate ranching community, comprised of men like Ralph Jennings, Edwin Taylor, Paul Anderson and Frank Randleigh.

> At roundup in the fall, Art would organize the drive so that sections of the range would be systematically covered. There were three holding corrals complete with cabins and sheds. One was called "Freezeout" on the northwest slopes of Wagner Butte. Another was "Jacks Flat" [mapped as Jack Flat today] on Seven Mile Ridge. A third was called "Brick Pile" on the northern tip of Seven Mile Ridge.
>
> When the cattle were gathered, each owner separated out his own and with dogs and helpers trailed them home. Some buyers came right to the ranches to buy steers. When steers sold they were driven to the loading pens on the railroad near Medford to be shipped to market. When beef prices were high the ranchers made a profit. But if prices were low, some faced serious trouble.

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[104]Brown, *Rogue River*, I, pp. 190, 195.

[105]Ibid., p. 196.

[106]Ibid., pp. 199-200, 232.

[107]Black and Black, *Ruch*, pp. 104-5.

When their Jacksonville bank went under in 1921, the Kleinhammers were too heavily indebted to recover. After 1925, the bank owned their land, and Arthur's period of leadership in the ranching community was over. The ranch was worked on and off by others. A portion of it was developed into rural residences in the 1970s. Its fate is a parable of the late twentieth-century Applegate Valley landscape:

> To make the best use of the river frontage, this developer had the county relocate the road across one of the largest and best farm fields. Handsome rural homes were built along the river and on the hillsides overlooking the valley. Several of these residents carry on some hobby farming with horses, a few cattle and other animals. The farm fields which remain provide hay and pasture. This is still a beautiful area to visit any time of the year.[108]

"Overstocking of the ranges did much damage through the forest"

Early grazing reports from the Siskiyou National Forest do not generally depict a range in depleted circumstances. According to the 1911 report, there was "no crowding on any of the ranges and no overgrazing, infact [sic] all of the grazing portions of the Forest omitting the country north of Rogue River and the Illinois country north and west of Kerby, could carry more stock without injury to the range." This same report noted that "one small area of an acre or two" had been "rather badly overgrazed." This was located "just about 3 miles in the Williams Creek direction from the Oregon Caves and immediately on the trail." The cause: "the feeding of hobbled and tied horses used by tourists."[109] Later documents mention projects to improve springs around "damaged allotments" and campaigns to get the ranchers to separate their salting from their watering places so that the range would be "used evenly."[110]

The Applegate Valley was a different story. Guy Watkins' roots in the Upper Applegate go back into the nineteenth century. His father homesteaded in the Squaw Creek and Carberry Creek areas beginning in the 1890s—"they was living and farming there, but they never patented it, just like the mining claims," Guy says in an interview with Janet Joyer. Guy remembers that he "raised a bunch of hogs." "But it was different then," he says. "See, the first neighbor was a mile and a half away and you just let them run out on the National Forest 'til they got up on the back and damaged the National Forest.... There might be some of them you didn't see for six weeks. But if they got hungry they knew where to come and get something to eat."

In this interview, Guy remembered that he and his family handled their cows the same way. "They never thought about fencing them up for the winter. If they got hungry, why, they'd come in."[111] If Guy is right about his birthday, which he preferred only to identify by decade (the 1910s), the practices he is remembering probably date from the 1920s and 1930s, after the Forest Service grazing regime was already well established. If we add to this Gene Peterson's recollections of the late 1930s, discussed at length later in this report, we have grounds to believe that grazing was never effectively controlled during the period from the turn of the century through the Second World War.

We know that in the mid-1910s, even after a couple decades of grazing management on national forest lands, range conditions in the Applegate District were showing signs of heavy wear. John Gribble's diary often mentions the camera he carried with him. His collection of pictures, if it were available, would constitute a valuable resource for studying conditions on the Applegate landscape

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[108]Ibid., pp. 105-107.

[109]Siskiyou National Forest, "Grazing Report," December 11, 1911, p.2.

[110]Siskiyou National Forest, "Siskiyou Allowances: Permits for 1913," February 28, 1913, pp.2-3.

[111]*Recollections*, II, pp. 1, 9-10.

in the 1910s. The one picture we do have dates from September 7, 1915. Gribble's notation: "1800 head of sheep return to night camp from grazing west slope of Mt. Ashland. Summit of the mountain in the background, erosion gullies in the foreground."[112]

The Crater National Forest "Grazing Notes" for 1916 reiterate:

> Range was poor at start of season due to dry year. Grass was short and just beginning to grow when the cattle were turned on. Much grass was trampled by stock on ground that was just free of snow. This condition plus overstocking of the ranges did much damage through the forest. . . .[113]

A year later, Siskiyou Summit, Silver Fork, and Freezeout areas were listed as "badly overgrazed and in need of reseeding." Again the following year, 1918, Silver Fork was listed among the areas reported "overgrazed."[114] On the other hand, Forest Examiner B. W. Hoffmann reported that, although "all portions of the Applegate River" district were grazed, "no particular damage has been done to reproduction by stock."[115] It is worth noting, however, that in this instance "reproduction" refers to young trees, not forage.

Robert Webb, who worked for the Forest Service from the 1930s to the 1960s, remembered in an interview that as late as the early 1950s there were 35-40 permittees on the district and the district was badly overgrazed. "No feed at Silver Fork, except the sedge," he said, "and it didn't matter how close the cattle ate that, but there was always an old cow waiting for that sedge to grow up high enough to get a bit of it. . . . " Robert said that the Forest Service "replanted the area time after time" trying to get grass to grow. Finally, in 1965, they put in a water system to irrigate two-and-a-half acres, and "now it's well-stocked. Really beautiful in there."[116]

In the Wings

In 1912, the Forest Service surveyed the population residing in or visiting within the Crater National Forest boundaries. Although the figures reflect the forest as a whole, and are not broken down for districts, they offer a general portrait of the uses to which southern Oregonians were putting their government-managed landscape.

The largest category of persons living on private land within national forest boundaries was comprised of 121 stock raisers and their families. The next largest were the 76 farmers and their families. Together, these two groups accounted for over 90% of residents on private land within national forest boundaries.

By contrast, most of the people living on national forest land itself were the 57 miners and their families. These were joined by a very few farmers, lumbermen, and stock raisers, and their families. The ratio of women and children within this population was much smaller, indicating that mining continued to be the occupation principally of unmarried, or at least lone, men.

A large number of people, however, comprised the "nomadic population" of the national forest. Some of them were working there for a living. These included 322 engaged in logging (driving, scaling, clearing); 64 engaged in grazing activities (packing, herding); 106 in "prospecting, cruising, surveying, etc.;" and 57 working as temporary Forest Service employees. Others were playing -- 2,100 day visitors ("picnickers, wayfarers, etc.") and 3,500 campers ("hunting, fishing, berry- or nut-picking, boating, bathing, climbing, etc."). The roundness of these latter two figures

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[112]Brown, *Rogue River*, I, p. 180.

[113]Ibid., p. 179.

[114]Ibid., pp. 190, 196.

[115]1915 Crater Recon. . . , p. 16.

[116]*Recollections*, II, no page number.

indicate that they were estimates, and thus perhaps a bit less reliable than the earlier figures based on the actual counting of individuals.[117]

All told, these figures indicate a wide variety of human activity on the landscape. Their proportions, however, are probably not entirely representative of the Applegate District. Other records indicate that during the first half of the century, logging was much heavier on the east side of the Crater Forest than in the Applegate region, and tourism was much heavier in the Prospect District than in the Applegate area. Grazing was somewhat more extensive on the east side, particularly the Dead Indian plateau, than in the Applegate Valley. But the Applegate Valley represented good low-altitude farming land, as compared to the east side, in the higher Cascades. And the mining population on the forest was probably disproportionately weighted toward the Applegate region.

If we skew the figures to account for these idiosyncrasies, we might imagine the following general population portrait for the Applegate region of the national forest during the first quarter of the twentieth century: seasonal and growing recreational use (with Squaw Lakes probably well represented), but its growth limited by the lack of extensive road development; relatively light logging activity comprised of very small sales; most of the private land occupied by stock raisers (who were also farmers) and farmers (who were generally at least small-time stock raisers) who utilized the national forests for their stock but who themselves, because of their reluctance to spend any more time than necessary riding herd on their stock, represent relatively few person-days on Forest Service land; and as the largest constant human presence on Forest Service land, the resident miners who continued to reside on, search out, and extract mineral wealth from beneath Forest Service soil.

It is to these miners that we now turn. Compared to the stock raisers and farmers, their continued presence on the federal landscape was probably greater, although they represented less of the population of the Applegate region settled on private property. If we take current soil compaction studies as seriously as their author's would like them to be taken, the miners' impact on the landscape during this period is certainly less extensive than that exerted by the thousands of cattle and sheep roaming every part of the study area. But even though the halcyon days of mining were now past, their ability to physically change the shape of the landscape in the immediate vicinity of their mining activity continued to outstrip that of any other group in the Applegate area's population.

Mining: Still Going for the Gold

Waves of boom and bust, already well established as the rhythm of mining's life in the late nineteenth century, continued to break over the study area in southwest Oregon during the first half of the twentieth century. Although it never again attained the centrality in the economy of southern Oregon generally that it had enjoyed during the 1850s, it saw highly productive periods when it dictated the economic, social and environmental character of discrete localities for several years at a time—localities such as Sterlingville, the headwaters of the Applegate River, and the Waldo/Takilma area mining districts. These latter areas, on the old Sailors' Diggings, continued to be flavored by the mining culture throughout the period—more than the upper Applegate Valley, if only because the upper Applegate area's vibrant ranching community, enjoying a relatively reliable availability of water, did not find a parallel in the upper Illinois country.

After the hydraulic boom of the 1880s, things slowed down until another hydraulic wave rolled through at the turn of the century. Picking up its pace around 1899, hydraulic operations consolidated behind capital to fewer, more localized, and on average, larger, operations. The Grants Pass Commercial Club, ever on the lookout for the next bonanza, put out a pamphlet early

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[117]Brown, *Rogue River*, I, p. 124.

in the century to attract the attention of would-be miners. It trumpeted its County's claim to have the "highest grade ores ever mined in any camp in the world." Admittedly, "the pick and shovel... have been superseeded [sic] by the steel pipe and hydraulic giant capable of freeing and disintegrating three thousand cubic yards of gravel per day"—so newcomers had better bring their money with them. But success was virtually guaranteed:

> Mining is no longer regarded as a gamble for the reason that its splendid record for building great fortunes during the last two decades has placed it in its proper sphere and is today not only deemed one of the most legitimate but also one of the most remunerative vocations in which man can engage.[118]

A sign of new times in the gold business, perhaps, was the relative difficulty of quenching one's thirst with alcoholic beverages in southern Oregon in the early part of this century. The temperance movement was in full cry nationwide, of course, and it was the duty of civic boosters to demonstrate that their part of the country was inhabited by sober, hard-working and productive citizens. But, had the culture of gold mining, and its associated technology, persisted from the 1850s, no amount of temperance sermonizing could have closed down the saloons in Althouse or Waldo. Gold mining was now a generously capitalized, technologically advanced operation, and it attracted a different breed of miner. It also created a paradox: the new breed was capable of wreaking greater havoc on a riparian area than the old breed, but was prone to wreak less havoc on his liver by abandoning himself to the dissolute lifestyle of frontier boom towns.

The Grants Pass newspaper made this point quite explicitly in 1905.

> The miner of today has not the drinking proclivities of his pioneer ancestor. Not that he is any better morally, or that the pioneer miner was inclined to drink more than other men of his day, but wealth does not come to miners now with the ease and the quickness that it did to the Southern Oregon miners of the '50s and '60s and they can not spend money by the rule of 'easy come, easy go.' Mining now is a science and only those men who are industrious and skillful and who are not burned up with bad whiskey and dissipation will attain success and fortune that they all so eagerly hunt for and so few find.

The author found one saloon in Kerby. But he could find no saloons from the top to the bottom of the Applegate Valley or even in the resuscitated mining camps around Waldo, where there were at one time "saloons in plenty." He seemed not entirely displeased with the results of his survey.[119]

This more sober and workmanlike variety of hydraulic mining occurred on many of the streams that had already been worked in the 1880s. Areas of concentrated activity occurred in the

Applegate Valley along Elliott Creek near Joe Bar, at Browntown on Steve Fork in the Carberry Creek drainage, on Sterling Creek,[120] and in the Illinois Valley on Sucker Creek,[121] and in the Waldo/Allen Gulch/Butcher Gulch vicinity. The Simmons and Wimer mines owned more than a thousand acres of mining ground near Waldo around the turn of the century. A newspaper account at the time showed enthusiasm: "They have miles of ditches and flumes, good water pressure and operate six or more giants, both day and night from nine to eleven months in the year.... The annual output of each of these mines is from $20,000 to $60,000."[122]

118*Mining in Josephine County*, n.p.

119Rogue River *Courier*, August 18, 1905, in Hill, *Josephine*, II, p. 17.

120Frances Port Clark, Applegate District Ranger Lee Port's daughter, remembers seeing hydraulic nozzles operating in Sterling Creek in the 1920s. She says "they really tore up a lot of landscape with that mine." *Recollections*, II, p.18.

121The Wounded Buck Mine brought $70,000 out of a hole six feet wide, six feet deep and ten feet long in 1910. Hill, *Josephine*, II, p. 79.

122Street and Street, *Sailors' Diggings*, p. 31.

A more sober and workmanlike variety of hydraulic mining occurred on many of the streams that had already been worked in the 1880s. A 1917 photo shows activity on Sterling Gulch.

The gold dredge was one of the newer, more capital-intensive technologies that attracted the attention of the increasingly sober mining population and that helped fuel the early-century mining boom in the study area. A dredge floated in a small, "self-created" pond created in a stream by used-up rock tailings that had already been worked over for gold. It worked the upstream gravel of the stream bed by a dragline, drawing in the material to be sorted for gold and dumping it downstream. In this way, the pond on which the dredge floated worked itself upstream, along with the dredge.

Dredging began in the study area around 1903. Although it had a limited application geographically, it had a major impact upon those drainages in which it was used. The Applegate River near Ruch, Forest Creek, Poormans Creeks, Thompson Creek, Oscar Creek, Althouse Creek, and the Illinois River near Eight Dollar Mountain saw heavy dredging during this period.[123] A large steam-powered dredge drew gravel from the bed of the East Fork of the Illinois River, near Takilma, by means of a continuous series of steel buckets. "As late as 1918 it was still intact, with all of the boilers and machinery in place, nearly submerged, with the bottom of the dredge facing the sky."[124]

Cap Saltmarsh is an Applegate old-timer who remembers the dredge that worked the entire length of Forest Creek; "and it paid off good." "There was quite a lot of money taken from Forest Creek" in hydraulic days, he said. But water pressure was hard to come by on Forest Creek. The dredge was much more effective. "They dredged that whole cockeyed thing up there," Cap remembered, from near Ruch clear up to the Black place." And it paid," said Cap Saltmarsh. "Some of it paid off pretty great. Son of a gun."[125]

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[123]Hill, *Josephine*, II, p. 37.

[124]Ruth Pfefferle, *Golden Days and Pioneer Ways*, (Grants Pass: Josephine County Historical Society, 1977), p. 29.

[125]Kay Atwood, "Interview of Dean Saltmarsh," April 1, 1974, in Marjorie Eden and Kay Atwood, eds., *Jackson County Conversations* (Medford, OR: Southern Oregon Historical Society, 1982), p. 12.

An aerial photograph from 1939 shows the effect of dredging in Forest Creek. "They dredged that whole cockeyed thing up there," Cap Saltmarsh remembered. Ruch lies south along the highway, just out of view at the bottom of this photo. The dredge itself can be seen afloat in a pond at the head of the tailings.

A variation of the dredge used heavily during this period was the doodle-bug. This caterpillar-mounted drag-line scraper or power shovel moved along the bank of the pond, while the gold-sifting mechanism sat on a floating barge in the pond. These were more inexpensive dredges to build, and they could be more easily dismantled and moved to new locations. They were also useful in situations where there wasn't enough water to float the standard dredge. One observer saw many of these in southwestern Oregon as late as the late '30s and early '40s.[126] Elliot Creek supported a doodle-bug operation into the 1960's.[127]

Lode mining for the gold embedded in quartz deposits also continued throughout the study area during this period. The earliest shafts had been sunk back in the late 1850s and 1860s; they attracted a lot of attention when water for processing placer deposits was in short supply. Quartz finds were regularly reported in the papers with an enthusiasm that suggested a whole new wave of prosperity for southern Oregon. "Big wages are made . . . ," and "A better chance to make a big strike, it appears to us, could not be offered" are typical reflections of the booster spirit that will never say die.[128]

In February 1860, for example, a group of men found a promising ledge of quartz just below the divide between Brush and Carberry Creeks in the Upper Applegate drainage. This became the well-known "Applegate Quartz Mine" or "Steamboat Ledge." The first gold was recovered in June 1860. Another rich pocket was located in February 1861.

> In one week the crew took out enough to pay all the previous expenses of the mine. Four new arrastras were built, along with other improvements as the mine continued to yield spectacular amounts of gold.

A mine this promising inevitably attracted competing claimants who eventually entrusted their fates to a court of law. When the ownership issue was settled, bigger mills were brought in and much less gold was taken out than had been envisioned. The mill closed and the mine was left for lone prospectors to pick through every so often, just in case the ones before them hadn't been sufficiently thorough.[129]

The same quartz excitement broke out in the Illinois Valley in the same year, 1860, especially around Althouse.[130] Quartz boomlets continued to break out during the late nineteenth and early twentieth centuries. Most of the ridges of the study area were probably explored several times over in the course of a century of gold fever. Walling describes the process of locating a "pocket" of quartz gold:

> The art of pocket mining consists essentially in discovering what are called crossings—narrow veins of quartz or yellowish "dike," so-called—and tracing these to their intersection with an ordinary quartz vein, at which point, by some mysterious dispensation of nature, a pocket is usually formed. Elbows are bends in the vein, at which pockets are also to be looked for. The intersection is arrived at by means of a shaft or a tunnel of small diameter, frequently only a yard or so, as the object invariably is to remove as little dirt as possible. Having calculated where the pocket probably lies, the miner arrives at that point in the most expeditious and least laborious way possible, proceeding, usually, along the quartz vein in order to test by means of the pan the nearness of the gold deposit. The "color" is usually struck at a distance of a few feet and thereafter all the earth taken out is jealously examined lest the pocket be passed and so lost. When finally it is arrived at, the

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126 Albert Burch, "Development of Metal Mining in Oregon", *Oregon Historical Quarterly*, June, 1941, p. 106-128.

127 Jeff LaLande, personal communication.

128 Jacksonville *Democratic News*, May 1, 1869 and September 10, 1870.

129 Walling, *History*, p. 329.

130 Walling, quoted in Hill, *Josephine*, I, p. 12.

> gold is almost entirely contained within the space of a few cubic feet, and frequently may hold a single bucketful.[131]

This bucketful would be worked over with a "single hand mortar and pestle" and washed in a pan.

For it to result in anything more than an occasional coffin-sized hole in the woods,[132] quartz gold mining, like hydraulic mining, depended upon the availability of new technologies and the capital to acquire them. An early, fairly cheap and simple technology was the arrastra mill, which ground the gold-bearing ore into a finer substance to allow the gold particles to be separated out. Usually these were water-powered, although sometimes mules or oxen were used to turn the mill arm. The ore was placed into a rock-lined tub whose seams were packed with clay. Attached to a shaft in the tub were arms which dragged or pushed the rocks that crushed the ore. Often, mercury (quicksilver) was mixed in with the ore to pick up gold dust. Water was dumped into the mill to drain off the powder or sand.[133]

Larger deposits, as on Steamboat Ledge, required using heavier machinery to move tons of quartz, and often the arrastra would give way to stamp mills for processing the earth. Milling techniques like these, along with more extensive shaft construction, represented major capital investment which, it seems, was rarely repaid. Walling thought "it would be difficult to point out any locality whatever in which the net returns have been greater for the amount invested and the work done" although, not wanting to rain on anybody's parade, he held out for "a future time when, the subject of mining and milling being better understood, much greater things may be expected."[134]

In reality, "much greater things" probably never occurred. Eighty years later, Haines and Smith echoed Walling, concluding that, with regard to quartz lode mines, "more money has been poured into them than ever came out of them."[135] At least three quarters of all the gold taken out of the dirt of southwest Oregon came from placer deposits. Of the lode deposits, "six mines were responsible for the bulk of lode production."[136] The Fowler Lode above Carberry Creek, which became the Steamboat Mine, is the one that lies within the study area.

The new gold-mining boom, with its giant nozzles, its doodle-bugs and its arrastras, lasted only a few years before shrinking back to its slower, off-again, on-again pace through the 1910s and 1920s. The peak year for gold production was 1906, when about $600,000 in gold came out of southwestern Oregon—about the same amount that came out in an average year during the hydraulic boom of the 1880s. After 1906, gold production went into steady decline until 1934, when the price of gold, controlled by the federal government, rose from $20 to $35 per ounce. Gold production rose sharply from an estimated $18,000 in 1933 to an estimated $180,000 in 1934. It continued to rise through the decade to its all-time peak of just over $1 million in 1940.[137]

The Depression era gold mining excitement—probably the last major boom in gold's career in our study area—grew from two causes: the governmentally guaranteed, relatively high price of the

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131Walling, *History*, p. 327.

132John Ifft, former BLM employee, says you can hardly walk anywhere in the Applegate country without stumbling on these shallow pits. Ifft Interview, May 22, 1995.

133Francis, *History*, p. 13.

134Walling, *History*, p. 326.

135Haines and Smith, *Gold*, p. 4.

136H. C. Brooks and L. Ramp, *Gold and Silver in Oregon* (Portland, OR: Oregon State Department of Geology and Mineral Industries, 1968).

137These are estimates drawn from two different sources whose jurisdictions and accounting techniques do not necessarily match. When statewide figures are given, we have generalized from the particular years for which comparisons are available that slightly less than half of statewide production came out of southwestern Oregon. Hill, *Josephine*, I, pp. 38-9; Burch, "Metal Mining," pp. 121, 123.

bewitching yellow mineral; and the pressure of economic hardship. An influx of rural residents joined with a revived interest among locals to turn to the labor-intensive technology of an earlier era in a final push to discover the remaining placer deposits. Only a few years previously, placers had been thought to be exhausted, or so minimal as not to deserve pursuit. The Depression era's "hard times" created a population ready and willing to toil for gold on the chance of turning around their failed fortunes. A good eye from a mile up could have picked out panning, hydraulic, drag-line, and pocket-digs spread liberally about the study area in one more attempt to get gold out of dirt that had already been well sifted by human hands.

John and Marguerite Black, our reliable historical tour guides to the Upper Applegate Valley, describe this phenomenon.

> The Depression [offered] a way for men literally to dig out a little money for subsistence. County relief agencies sent many of the unemployed into the hills with county-provided gold pans and simple tools to work the old Sterling mine tailings. A report filed in 1933 showed nearly one hundred people were mining there and along other creeks.[138]

As it turned out, high-rolling corporations shared some of the high hopes of the lone, down-on-his-luck prospector hoping to find enough for his evening meal. This is the era, to which we referred in telling Sterlingville's story, when the Quercus Corporation moved in to take another run at the Sterling Creek gravel. In 1934, it built a concentrating plant drawing on water in the existing reservoir. "Big earth-moving machinery and trucks were brought in to remove the topsoil, then haul the gravel to the plant for processing. The project ended in failure, mainly because the gold was no longer where the men worked." Still, the persistent Paul Pearce "mined this claim alone using a hydraulic giant nozzle every season until 1957. Pearce was one of the very few miners who made a good living at it all his life."[139]

Frances Port Clark thinks of the landscape as having been relatively kind to the people of the Applegate during the Depression. "Venison was reasonably plentiful, and along the river anybody could pan out a few 'colors', and if they followed it with any degree of vigor, they could end up with enough to buy salt, flour and beans, something to supplement the meat."[140] Which, along with whatever New Deal programs offered by way of relief or employment, had to hold them until the Japanese and the Germans came along to offer something better.

In 1940 and 1941, gold production in the study area was at record levels. The Esterly Mine near Waldo was the largest in the upper Illinois, but smaller operations were widely spread in the study area.[141] Then the war intervened. In 1942, the War Production Board virtually stopped the more substantial gold mining operations by diverting labor and materials from what was considered non-essential to war-related activity.[142] The economic era that dawned after the war, contrary to the fears of many Americans, represented a new prosperity that sustained itself for several decades. Re-working the ruined leftovers of previous generations of miners couldn't compete with the economic opportunities offered by the urbanizing, industrializing post-war world. Gold mining faded as a major contributor to the economy, the social life, and the landscape of the study area.

Still, small streams of gold trickled into the local economy. Josephine County's historian tells us that in 1963 there were about twenty placer operations in southwest Oregon, working on and off as water supplies permitted. Among them were familiar names like Democrat Gulch, Althouse,

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[138]Black and Black, *Ruch*, p. 96.

[139]Ibid., p. 98.

[140]*Recollections*, II, p. 19.

[141] Burch, "Metal Mining," p. 122-3.

[142]Hill, *Josephine*, 1976, p. 39.

Josephine Creek, Palmer Creek, the Illinois River, and Humbug Creek. During 1962, Snow Bird and Red Rose mines were still active along the Lower Applegate.[143]

Going for the Rest of It as Well

No mineral approaches gold in its impact on the culture, the economy or the environment of the Applegate and Illinois Valleys. But other minerals were mined, and deserve at least brief identification.

Lode and open pit operations searching for other minerals than gold began in the earliest period of Euro-American settlement. Among the more common were copper, tin, cinnabar (mercury ore), silver, and soapstone. Of these, silver and cinnabar were the most important in the nineteenth century. In February, 1860, a "veritable silver boom" occurred on the divide between Elliott and Beaver Creeks in the Upper Applegate, and on the ridges at Emerald Ledge near Spring Gulch.[144] Significant lodes were also reported near Althouse. Cinnabar was mined beginning in 1876 at several locations in the Upper Applegate sub-watershed near West Beaver Creek and Cinnabar Mountain.[145]

Another mineral, with a shorter mining history in southern Oregon, is chromite. During both World Wars, and then beginning with the Korean War and extending through the 1950s, chromite has been mined in many locations in both the Illinois and the Applegate valleys. The largest concentrations of chromite deposits are around Red Mountain in the headwaters country of the Little Applegate River, Beaver Creek and Squaw Creek; along Steve Fork and lower Carberry Creek and along adjacent areas of the Applegate River; on the divide between the headwaters of the West Fork of Williams Creek and Sucker Creek; south and east of Roundtop Mountain; throughout the gold placer country around Althouse and Waldo; and, on the western borders of the study area beyond O'Brien and Kerby, around Eight Dollar and Josephine Mountains. Dozens of prospected but largely undeveloped claims and perhaps a score of once productive but now defunct mines dot these portions of the study area.[146]

Aside from "periods of national emergency," when the federal government offered incentive prices in order to stockpile this important component for making steel, the only functioning chromite mine has been the Oregon Chrome mine, located on a stretch of the Illinois River downstream from Kerby, between Pearsoll and Horse Peaks.[147] Mines that were worked are often easily identifiable by their open surface cuts of varying sizes. The landscape is dotted with small ones (e.g., 10 feet deep and wide, 10 to 30 feet long) and some quite large ones (up to 20 feet deep, 150 feet wide, 200 feet long). On some sites, ore was accessed by means of tunnels and shafts. Most mine sites include scattered dumps of abandoned ore. Without government incentives, peace-time chromite mining is not cost-efficient. After brief flurries of production, collapsing prices left the mineral sitting "in the dumps, wooden bins, and on railroad platforms."[148]

In the Red Mountain area of the High Siskiyous, a dozen claims have been worked, none of them very extensively. An example is the Chance Discovery Claim just southeast of Red Mountain at about 5,000 feet elevation. The workings there "consist of a partly caved open cut 20 feet wide, 40

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[143]Ibid., p. 39.

[144]Verne Blue, "Mining Laws of Jackson County, 1860-1876," *Oregon Historical Society Quarterly*, XXIII (March, 1922), pp. 140-1.

[145]Jacksonville *Democratic Times*, July 27, 1876.

[146]An excellent map of these claims can be found in the cover pocket of Len Ramp, *Chromite in Southwestern Oregon* (Portland, OR: State Department of Geology and Mineral Industries, 1961).

[147]Ramp, *Chromite*, p. 25.

[148]Burch, "Metal Mining," p.121.

feet long, and about 10 feet deep at the face, and some other minor bulldozer excavations. . . . A few tons of the ore were reportedly milled at Thompson's Mill in Ashland. . . ." Most of the Red Mountain sites were worked in the 1950s.[149]

Paradise No.2 Claim is an example of a chromite mine at the headwaters of the south fork of Deer Creek. This mine is marked by "an open-cut area approximately 150 feet wide, 200 feet long, with a 77-foot, northeast-trending tunnel."[150]

In the Waldo area, a total of 5,000 tons of chromite ore had been extracted by the two biggest mines, Chollard and Esterly, before the mid-1950s. The Esterly Mine is at the north edge of French Flat, showing a fifty-foot long trench plus several open pits. It dates to 1918. The Chollard Mine, at the head of Sowell Creek, a tributary of Althouse, was mined in 1918 and again in 1942. The ore was treated in a small mill adjacent to the site.[151]

The mineral that seems to have been most lucrative in the study area during the twentieth century—other than gold—is copper. It was first found in 1859 in the Illinois Valley. The "oldest producing copper mine in Oregon" is the United Copper Gold Mines Company, located about twelve miles down the Illinois River from Kerby. A smelter was built there in the 1860s and another in 1894. Both of these were closed by the turn of the century, although in 1899 several tons of copper ore were shipped to Tacoma for smelting. [152]

The most significant copper mining activity of the twentieth century coincided with the renewed gold boom around the turn of the century. The Queen of Bronze mine, near Waldo, was first discovered in 1862, although very little copper was taken out of it for four decades. The lode comprised a ledge "fifty feet thick at a depth of thirty feet, and fourteen feet of this is said to be pure sulphide, the most valuable of all the ores of copper."[153] In 1904, the Takilma Smelting Company of Colorado Springs put in a 100-ton-a-day copper smelter and began serious copper mining. It sustained high levels of production until about 1909. Falling victim to an economic downturn after 1907, its product lost 50% of its value overnight, and the firm cut back production. When the First World War came, the mine reopened, and between 1916 and 1918 it shipped several thousand tons of copper ore to Tacoma for smelting.[154]

The Queen of Bronze mine gave rise to the hamlet of Takilma, which in more recent years has figured prominently as a mecca for a counter-culture population. Takilma was founded around the turn of the century. It was named for the Native Americans—"Takelma"—who had been displaced from the Illinois Valley to the Siletz Reservation in Tilamook County, where the last twenty-seven of them represented their embattled culture at the turn of the century.[155]

One of Takilma's early boosters, Draper by name, admitted in 1902 that "we have not yet much of a town, but we believe it will eventually become a place of some little importance."[156] Over the next two years, as if to make its booster into a minor prophet, it turned from a tent city into a settled village of perhaps half a dozen houses, a couple stores, a dance hall and a schoolhouse. And, of

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[149]Ramp, *Chromite*, pp. 87-8.

[150]Ibid., p. 137.

[151]Ibid., pp. 146, 150-51.

[152]Burch, "Metal Mining," p. 115.

[153]Walling, in Hill, *Josephine*, I, p. 12.

[154]Burch, "Metal Mining," pp. 117, 119.

[155] native numbers

[156]Letter by T. Wain-Morgan Draper to Rogue River *Courier*, June 9, 1902, in Street and Street, *Sailors' Diggings*, p. 24.

course, a couple saloons which were destined for extinction, if our 1905 saloon surveyor from Grants Pass is to be believed.[157]

In the Upper Applegate, the Elliott Creek mining district was a veritable beehive of copper activity. Fifteen-hundred claims were filed there before 1909, and it produced on a sustained basis from 1906 to the Armistice that ended the First World War. The largest operation in this district was a group of some twenty-six copper sulphite claims above the head of Joe Creek, a tributary of Elliott Creek, which eventually became the Blue Ledge Mine.

> The Blue Ledge mine was developed by more than 15,000 feet of drifts and raises including a series of adits (nearly horizontal passages from the surface) that penetrated a cliff-like slope. A steeply inclined passageway connecting a working place with a lower one extended 210 feet below the lowest adit, from which levels were turned at 100-foot intervals. These workings explored the deposit for a vertical distance of about 800 feet and a horizontal distance of about 2,000 feet.[158]

According to one report, the Blue Ledge Mine was not about to let its patriotism cloud its financial vision. During the war, it held back shipment of its ore until prices reached a war-time high in 1917. Then it hurriedly shipped its product down Elliott Creek by wagon and on to Medford by truck for transport by rail to a Tacoma smelter.[159]

The Blue Ledge Mine contributed substantially to the estimated $2 million in copper taken out of southern Oregon and northern California after turn of century. Though significant regionally, production never even approached the levels of other distant copper mines, such as those in Arizona, where entire mountaintops were removed. This means also, that the corresponding level of impact on the environment was not reached. But at its peak, the communities adjacent to the Queen of Bronze and Blue Ledge mines were thriving human centers of life on the land. Takilma, built on privately owned land at a more accessible location, weathered the post-World War I copper bust and ultimately achieved another life in the last quarter of the twentieth century. The Blue Ledge community, which contained some thirty-eight buildings at its height, had no reason for existence, at the crest of the Siskiyous, after copper's value plunged. John and Marguerite Black tell us that "by 1919, everything was dismantled and the Blue Ledge became a mining legend."[160]

The earth has been opened up, in the study area, for construction and agricultural purposes as well. With the spread of a network of roads for access to forest resources as well as for residential and commercial purposes, quarries and gravel pits have proliferated throughout the study area. What brought Euro-Americans to the Applegate and Illinois Valleys in the 1850s were the rich gold-bearing gravels deposited in the channels and bars of the rivers as well as on the floodplains and the benchlands above them. The floodplain gravels, many of them already sifted through for "color," are the most useful for construction materials. On the Applegate River, they are deposited from ten-to-twenty feet deep in the gradually widening lower terrace that runs along the river beginning about eight miles above Ruch.[161]

157Ibid., pp. 23-5.

158Marjorie L. O'Harra, *Southern Oregon: Short Trips into History* (Medford, OR: Southern Oregon Historical Society, 1985), p. 143.

159LaLande, *Prehistory and History*, p. 32.

160Black and Black, *Ruch*, p. 126. There is a fine photo of the Blue Ledge mining camp, on the crest of the Siskiyous in the headwaters of the Applegate, around 1920, in O'Harra, *Southern Oregon*, p. 143.

161Herbert G. Schlicker and Robert J. Deacon, *Gravel Resources of the Applegate River Area in Jackson County, Oregon* (Portland: State Department of Geology and Mineral Resources, 1970), pp. 8-9.

The lower Applegate River floodplain has been the primary source for construction gravel for the Grants Pass area, with numerous gravel pits spread through the Williams Valley and on the mainstream floodplain from Provolt to Wilderville, with special concentrations around Murphy. Gravel pits occur along other major streams as well, particularly the Deer Creek floodplain and the upper Illinois. Quarries dot the higher landscapes, particularly on Marble Mountain south of Wilderville, at Munger's Butte near the head of Powell Creek, south of Little Grayback (Josephine County), south of Little Sugarloaf, on upper Althouse Creek, and on the Sturgis and Steve Forks of Carberry Creek.[162]

One last delving of humans in the soil is worth mentioning. At the Jones quarry, near Williams, marble block began to be carved out of the earth around 1880. Some of it was hauled by wagon to Redding and put onto railroad cars for the long journey to Washington, D.C., where it would be used in the construction of the Washington Monument. Lime was also taken from this quarry as far back as 1860 by a process known as "burning lime." This process converted calcium carbonate (e.g., limestone) into calcium oxide (lime). The calcium oxide was then used for industrial purposes such as making porcelain and glass, bleach, and cements In agricultural application, lime was used to treat acidic soil.

> Huge logs were piled together and marble rock dumped on top of them, then more logs were added until the pile was twelve or fourteen logs high. When fire was set to these huge piles they would burn for days.

Monument (tombstone) marble was still being extracted from this quarry in the early 1900s, and after 1934, with new management, agricultural lime was again produced.[163]

Where Is Waldo?

On August 1, 1916, the Logan-Cameron mine in Waldo delivered three gold bricks to the First National Bank in Grants Pass. They were worth $3,000 each. Not a little excitement attended the delivery. "This month's cleanup will be the largest in the history of the mine at any time," reported the Grants Pass Courier. "When it is finished the result is expected to express $14,000 in the rich yellow metal that all seek."[164]

Did the several score residents of Waldo remember the glory days, when thousands of grizzled miners plied their streets and sought relief in their saloons? Did they imagine a renaissance?

It was not to be. The war ended, the mining faded, the place emptied out. During the 1920s, the state highway department decided Waldo wasn't worth the extra miles. It straightened out Highway 199, missing Waldo by five miles. O'Brien, therefore, became the "metropolis" it is today. The last store and post office in Waldo closed in 1928.[165]

But much larger Jacksonville isn't exactly on the main route either. Maybe Waldo could have hung on, washed its ancient buildings, installed an espresso machine, added a French chef or two, and waited for the Visa Gold in some pudgy tourist's hands to replace the yellow stuff that used to flow from miners' pouches into the cashboxes of general stores, inns, saloons, dance halls.

No such luck. Waldo would be washed, for sure—as in "washed away." In 1937, "giants" took the town. The Grants Pass newspaper thought it worth a story, and so do we.

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162 Herbert G. Schlicker, R. A. Schmuck and Pedro Pescador, *Aggregate Resources of Josephine County*, Oregon (Portland: State Department of Geology and Mineral Industries, 1975), p. 28 and accompanying "Map of Josephine County Quarries and Gravel Pits."

163 Francis, *History*, p. 61.

164 Grants Pass *Courier*, August 2, 1916, in Hill, *Josephine*, II, p.4.

165 Street and Street, *Sailors' Diggings*, p. 18.

> Old Waldo . . . has been literally washed away to the ripping thunderous roar of hydraulic giants. . . . This year miners thought to extract that gold that should be on the bedrock of the channel on which the town stood. So pipes were laid, giants placed, and for days the dull roar of water was heard as the town's only streets [were] washed through sluices. The water cut to the very base of the old brick and stone building that has stood as Waldo's central structure since 1863. The building is left standing, its sagging sheet metal shutters, its gaping doors and windows, its caved in roof looking the more grotesque as it stands precariously atop its six-foot foundation of rocks, which the early day craftsmen built on bed-rock.[166]

The man responsible for finally washing Waldo away was Earl K. Nixon. He was associated with the Esterly Mine, which had revived hydraulic mining in the area during the Depression and would continue to find gold there until World War II closed things down in 1942. Soon after Mr. Nixon chanced to desecrate history by undermining the foundations of "Old Waldo," he was named director of the new Department of Geology and Mineral Industries established by the State of Oregon.[167]

Logging

"This is a neat mill and is near a fine body of the choicest timber."

From the earliest days of settlement, the settlers cut down trees across the study area. They cleared trails and roads and pasture and garden land, and often they incorporated the logs into their homes. Large ponderosa and sugar pines were favorites from the beginning for construction. Oak and madrone were cut for firewood. Small-scale muscle-powered whip-saw mills were the first mills in the region, soon to be replaced by water-powered mills. One of the earliest in the region was built by William Hughes to supply lumber for Fort Lane at $125 per thousand.[168]

The earliest large-scale demand for timber, however, came from the goldfields. Flumes, chutes, and boom towns all needed to be thrown up with haste. Two whip-saws in Waldo in the early 1850s were producing some 20,000 feet per week to supply the diggings. Chinese miners ran a mill in Sailors' Diggings. An Althouse man named Briggs had plans to build a water-powered sawmill in 1862, although we don't know whether he followed through. In 1877, David Thompson of the Sterling Mine Company contracted a Mr. Irwin of Sam's Valley to mill material for the Sterling Ditch. Irwin moved his water-powered mill onto the site and was soon producing 13,000 board feet per day, "which was a nearly unheard of figure for southern Oregon at this time." In 1887, Grossman ran a sawmill three miles outside of Kerby.[169]

The impact of these activities was readily apparent around the streamside mining communities and on the agricultural flats where the earliest logging occurred. LaLande tells us that "most of the mature pines along the south side of the lower Little Applegate were harvested to supply lumber to Gin Lin's hydraulic mine during the 1870s."[170] This pattern, supplemented by profligate use of fire for vegetation removal, was no doubt repeated in the flats and knolls and gulches surrounding every mining district.

By the mid-1880s, the Illinois Valley mining boom had faded for the moment and milling activity subsided as well. According to Walling, only one mill operated in the upper valley, on Sucker

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[166]Grants Pass *Courier*, July 19, 1937, Ibid., p. 21.

[167]from letter by Clarence R. Stout, March 20, 1967, in Hill, *Josephine*, 1976, p. 78-9.

[168]Walling, *History*, p. 342.

[169]Ruch Pfefferle, "Illinois Valley Sawmills," *History of Josephine County*, p. 23.

[170]LaLande, *Little Applegate*, p. 25.

Creek, producing about a thousand feet a day.[171] J. W. Bennett, "one of the pioneers of Josephine county," decided to get into a different business. In 1886, he put an ad in the paper for his water powered mill in Butcher Gulch near Waldo. "This is a neat mill," he said, "and is near a fine body of the choicest timber." The mill came equipped with "an up and down saw, a block mill for sawing flume blocks, and a circular which is used after the log has been slabbed."[172]

"The going rate was not a good price."

When mining picked up again at the turn of the century, logging did too. By 1899, J. Logan was operating the Simmons sawmill at Waldo, "sawing 120,000 feet of lumber for the dredger plant of the English-Canadian company on the Illinois River."[173] In 1910, the Kittermans were operating a water-powered sawmill near the present intersection of Takilma Road and Dick George Road southeast of Cave Junction. Henry Pfefferle took his pine trees there to be milled, on shares, so that he could build a house. Ruth Pfefferle identifies several others, most of them temporary operations that moved on when the supply of wood ran out. Pfefferle also tells us that "some operators bought land from the county and when the timber was all cut off let the land go back to the county so they would not have to pay taxes. Some land owners sold their stumpage, but the going rate was not a good price."[174]

But more was happening in southern Oregon than mining, by then. In the Rogue River valley, from Ashland to Grants Pass, as well as in the lower Applegate, fruit and vegetables were being grown and shipped out of the region. Packing and shipping boxes fueled a rising demand for wood products. By 1908, there were at least fourteen sawmills in commercial operation in Josephine County, all of them within thirty miles of Grants Pass. Sugar pine was the wood of choice. Three planing mills, three lumber yards and a box factory in Grants Pass kept the fruit growers supplied.

In addition, quantities of southern Oregon lumber began flowing to California and to the eastern states around this time. The Neil Creek mill sent the first commercial shipment of lumber from Jackson County to California in 1897, and by 1921, when timber from the first large Rogue River National Forest sales was being milled, Jackson County had twenty-five sawmills in operation.[175] According to one estimate, twenty million board feet were being cut annually in Josephine County by the first decade of the century.[176] By the late 1920s, the demand for construction lumber began to outstrip that for orchard fruit boxes in the local timber industry.[177]

But most of the timber feeding the Rogue Valley's saws throughout this era was not coming from the Applegate and Illinois Valleys. It was being taken by railroad out of the Cascade Range, off of the relatively accessible forestland on the Dead Indian plateau or around Butte Falls and Prospect or off the east side slopes near Pelican Bay. The Applegate and Illinois drainages, with their steep Siskiyou slopes and what many considered inferior stands of timber, and lacking railroad access, would wait until the halcyon days of the 1950s to become major players in southern Oregon's logging act. Until then, their logging story might be best told by the Pursel family and the Pullen brothers.

171Walling, *History*, p. 455.

172Rogue River *Courier*, July 23, 1886, in Street and Street, *Sailors' Diggings*, p. 31.

173Rogue River *Courier*, August 3, 1899, Ibid., p. 31.

174Pfefferle, "Illinois Valley Sawmills," p. 23.

175quoted in LaLande, *Outlook*, p. 41; Brown, *Rogue River*, I, p. 207.

176Francis, *History*, p. xiv.

177LaLande, *Outlook*, p. 42.

"Logging Was Pretty Good Then:" The Pursels and the Pullens

When Cap Saltmarsh reminisced for Kay Atwood in 1974, he recalled the days after his stint as a Forest Service employee, when he worked as a logger. This was before he bought one of the earliest chainsaws. When you cut trees, you did it in a much quieter forest with a cross-cut saw. The logs he cut went to the Pursel mill on Yale Creek, he said.[178]

The Pursel mill kept the Applegate Valley in rough-cut lumber for nearly half a century. Charles Pursel came from Pennsylvania, settled in Jacksonville, married Mary Louden and built a house and earned his money as a carpenter until, in the 1890s, he moved his family to the Applegate Valley above Star Gulch. He started milling lumber by steam engine, dragging the logs out of both private and federal forests with his oxen.

In 1906, Charles Pursel bought Frank Crump's 360-acre place (a former Cantrall family homestead) on Yale Creek in the Little Applegate watershed. It had good timberland and cultivated fields on it. Pursel got his oxen to haul the mill over from the old place near Palmer Creek. "People came from miles around" to buy his lumber for their houses and barns. Here's how he did it.

> Heavy beams were usually hewed from small logs. Roofing was of hand-split shakes from big, straight-grained sugar pine trees. The mill did not run on a daily schedule. When a neighbor or a farmer needed lumber, he ordered it. Nelson and his brother went up in the woods, felled the trees and skidded them to the mill. Then they sawed the lumber to fill the customer's order.

In 1917, Charles Pursel sold his ranch and his mill and moved to town. But the ranch came back to him when the buyer couldn't pay, so his son Nelson moved back there with his wife Ina and they bought some used equipment and got another sawmill going in 1930. Nelson's brother-in-law, Fred West, worked there too. By 1935, Nelson had exhausted the supply of mill-size timber on his ranch, so he bought another ranch a mile on up Yale Creek and moved his sawmill there. He tried to get out of the sawmill business several times by leasing it to newcomers, but always got it back. Finally, in 1947, he sold it for good and it went off to Butte Falls. Nelson and Ina went off to live with family—his sister Ethel and her husband Fred West—downstream on the Taylor place.[179]

The Pullen family showed up in the Illinois Valley in the early '20s, and the two boys, Clifford and Perry, went to work at the Kitterman sawmill on the Holland Loop Road, even though they "were not much more than kids." Kitterman bought logs from landowners for "two bits a thousand", and George Houck hauled them in with his six-horse team. After a few years, Perry built his own tie mill. In 1940, he added a big mill on thirteen acres "about 800 feet from Holland Loop Road on Dick George Road, on the east side of the road." A man who worked for the Siskiyou National Forest loaned him the $5,000 to build it when the bank turned him down. Perry paid him back in lumber.

After a while, "Roland Tycer came by with his tractor and scooped out a little mill pond" so Perry wouldn't have to drag his logs to the mill. The war came. Business picked up. So "Perry had a big pond dug and bought a GMC truck." He wired the place for electricity, including the sixteen houses he'd built for his workers. Perry had eleven men working for him: "one on the pond, one on the slip, one turning logs, one tailing off, the sawyer, the edgerman, the trimmer, the strip puller, the ratchet setter and two on the green chain." Men were scarce during the war, so he hired women. "One woman was on the carriage and her husband also worked for me. Another husband and wife team—he ran the edger and his wife picked up the strips."

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[178]Saltmarsh Interview, *Jackson County Conversations*, p. 29.

[179]Black and Black, *Ruch*, pp. 107-113.

In 1949, Perry shut down his mill "when many of the small mills closed." It burned down in 1950. "There is nothing left now to show the site of the mill except the pond."[180]

These mills tell two versions of the typical logging story in the Applegate and Illinois Valleys during the first half of this century. Until World War II, logging continued to be a fairly small-scale, localized activity in the study area, and primarily on private land. A 1921 Forest Service management plan found that "only two sawmills were operating within the entire Applegate River drainage, one on Thompson Creek and another about five miles west of Ruch." Even these were closed within five years.[181]

In the Illinois Valley, Jack Villair's sawmill was somewhat larger than the Pullens'—he employed several dozen men and cut around 50,000 board feet of "yellow" (ponderosa) pine, sugar pine, and sometimes cedar, per day during his six-month operating season until he dismantled the mill and moved to the Smith River in 1949.

Several other small mills operated in the Illinois Valley as well. Blake Barton ran a couple of them along the Redwood Highway in the early 'forties; Art Drews ran one near Takilma on the Illinois River and another at Bridgeview during the Depression. He then moved to present-day Cave Junction and fell "the first trees that were cut" from the forested future town-site. The Schmitt Brothers logged and milled in the Selma area.[182] But on the whole, while other parts of the Rogue and the Klamath drainages experienced the innovations of steam-powered donkey logging, railroad logging, and new milling technologies, the study area lagged behind the rest of the region in developing its timber resources.

Thinking back on it, Pearl McKee Byrne, whose husband John gave up farming to do logging sometime around 1920, said: "logging was pretty good then."[183] Ben Nork, who lost his leg in a logging accident in the Klamath basin and later skidded logs for a small mill at Applegate, extended the period but expressed a similar sentiment:

> The years 1935 to 1960 to me were 'the good old days of logging.' We did not have the government "red tape-environmental reports, blank forms, restrictions and all the rest. I will have to admit that their idea is right and their thought is to better things, but it seems they are having a terrible time making things better.[184]

"The timber in this district is scattered."

When the federal government began reserving its forestlands from sale to the public in the 1890s and 1910s, the timber industry was among those interests that raised a hue and cry. Distant powers, it was charged, would now control the timber and thus also the timber industry of the western states. Opposition grew to a frenzy when Gifford Pinchot reserved "thousands of acres of prime Douglas fir" in Washington state in a calculated, last-minute move to keep the General Land Office from opening them to private ownership.[185]

In 1907, Oregon's Senator Fulton tried to turn back the tide by amending an agricultural appropriations bill to forbid the president from creating national forests in six western states without congressional approval. Theodore Roosevelt signed it, since he needed the appropriations,

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[180]Pfefferle, "Illinois Valley Sawmills," p. 25.

[181]LaLande, *Little Applegate*, p. 25.

[182]Pfefferle, "Illinois Valley Sawmills," pp. 24-30.

[183]*Recollections*, II, p. 3.

[184] Barbara Hegne, *Logging the Rogue Valley*, (Privately published, 1991), pp. 78-80.

[185]Material for this and the next four paragraphs drawn from Steen, *Forest Service*, pp. 89-100.

but not before proclaiming an additional 16 million acres of new reserves in the same six states. He did it, he said, to save public timberlands from the "lumber syndicate."

Spokesman Review (Spokane, WA) 1908
William C. Morris, cartoonist

CONSERVATION TONIC

J. N. Darling, Des Moines *Register*

These comics from the era represent the public support behind Roosevelt's and Pinchot's "concerted action" to "avert the calamity of an exhausted timber supply."

The first generation of Forest Service personnel were indeed conscious of their role as guardians of the nation's timber. The influential Secretary of Interior (1877-1881) and former Missouri Senator (1869-1875) Carl Schurz, in 1879, had warned of a "timber famine" if the waste of the federal forestlands was allowed to continue. Gifford Pinchot picked up that theme in 1907, announcing that only "concerted action" could "avert the calamity of an exhausted timber supply." Forest Service inventories, he thought, showed that "the United States has already crossed the verge of a timber famine so severe that its blighting effects will be felt in every household in the land." He considered the Forest Service to be working for the interests of all Americans in opposing the "suicidal policy of forest destruction." In his inaugural Annual Report (1877) for the Department of Interior, Schurz commented:

> The rapidity with which this country is being stripped of its forests must alarm every thinking man.[186]

Since then, according to a Forest Service historian, "the whole doom and gloom notion of a timber famine has remained a vivid picture in the public mind." Ironically, Pinchot's crusade to avoid a timber famine was inaugurated in the very teeth of a glut in the timber market that issued in depressed prices and a falling demand for timber cutting on any lands at all, private or public.

Although grazing, an obvious cause of landscape deterioration, attracted most of the attention of the early regulators, Forest Service personnel tried to shift the attention toward timber issues from the start. An Oregon District Forester, E. T. Allen, registered his opinion that "grazing is a matter of secondary importance on lands that should properly be given up to timber raising." He wanted reseeding to take place on burned-over lands, not of forage grasses but of young trees.

The Applegate region does not seem to have witnessed a great deal of reforestation until 1916. A planting crew worked on Tallowbox Mountain in the spring of 1916 and again two years later, planting 96,000 yellow pine and 4,000 sugar pine seedlings.[187] Annual budgets until after World War II did not give a high priority to re-stocking, however. In 1939, existing records indicate that the only forty acres were planted on the Rogue River National Forest, although a few other "experimental" plantings were mentioned and plans were projected for eventually re-planting the 2500-acre Bowen Creek burn in the Cascades. In 1939, a Rogue River National Forest pamphlet informed the public that the Forest Service strategy was to rely on natural seeding because "planting is expensive, appropriations for the work limited, and long periods of summer drought make the results uncertain."[188]

Other kinds of silvicultural projects also seem to have been few and far between. A pine beetle epidemic cost the southern Oregon and northern California forests major yellow pine losses in the mid-1910s. By one estimate, 10% or a billion board feet of pine was destroyed. In the early 1920s, the Crater Forest did some control work felling trees, peeling and burning the bark. In 1925, however, the Crater Forest reported having done no control work at all.[189]

Early logging programs on the national forests were quite modest. In 1905, less than 100 million board feet were cut, compared to a total national output from all lands of about 40 billion. Even though sales were tripled annually for the next couple years, by 1907 the Forest Service still provided only two percent of the nation's total timber production. "It would be nearly four decades before Forest Service timber sales constituted an important part of the national cut."[190]

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[186] quoted in Michael Williams, *Americans & Their Forests: A Historical Geography*, (Cambridge: Cambridge University Press,1989), p. 393.

[187] Brown, *Rogue River*, I, pp 134, 192.

[188] *General National Forest Information*, p. 16.

[189] Brown, *Rogue River*, I, pp. 188, 231.

[190] Steen, *Forest Service*, p. 90.

In southern Oregon, the Cascade range was considered to provide the highest quality timberlands. The Applegate Distict's timberlands were considered inferior in quality and generally inaccessible. Harold Foster's 1916 report on the Big Applegate made this point.

> The timber in this district is scattered. It grows only in clumps and isolated watersheds, particularly on north slopes where it has escaped the ravages of forest fires. Practically all the district has been burned over from time to time during the past one hundred years and many areas are entirely denuded except for manzanita, chaparral, and chemise brush, which always comes in after burns. The best timber occurs in the Steamboat country, where Douglas fir of good quality is the predominating species. Other species, intermixed, are white fir, incense cedar, Shasta fir, sugar pine, yellow pine, Jeffrey pine, and knobcone pine. In the Elliott and Middle Fork Applegate creeks watershed some good stands of sugar pine and yellow pine occur on the southwest slopes, but the prevailing species here too are Douglas fir and white fir. A few large specimens of McNab cypress and Port Orford cedar have been found in this watershed. In the lower Big Applegate the hills are rugged and steep, ranging in altitude from 2,000 to 5,500 feet. They have mostly been burned over 30 to 50 years ago and present on the south and west slopes barren brushy areas. These areas afford no grazing except early spring feed and are worthless for any purpose except to conserve the moisture and for the protection of timber. All evidence points to the fact that they once were heavily timbered with pine and fir.[191]

A 1915 reconnaissance report for the Applegate area makes much the same point:

> Aside from the Carberry Creek, Middlefork Applegate and Elliott Creek Blocks the timber consists of light stands seggregated [sic] by the alienated land and denuded areas. It will have to be disposed of in small sales to settlers or in later years to millmen operating small portable mills. The timber in the three blocks mentioned above constitutes the largest body of Government timber in the Applegate District. It is inaccessible at the present time, being over 35 miles from the nearest railroad and in a rough mountainous portion of the country.

This report speculated that it might "be possible to dispose of the pine and the better portion of the firs" because of a projected rising demand for low-grade lumber, possibly for the fruit box industry. But it considered it "improbable that the demand for sawtimber will bring about any large sales in this region in the near future."[192]

Timber sale figures for National Forest lands during the pre-World War II period reflect the accuracy of this prophecy. When the first management plan for Crater Forest was written in 1928, the Applegate region was one of five "working circles" for the purposes of timber sales. It was estimated to have 1,448,717,000 total standing volume all species. Under the Forest Service's new "Austrian" formula for estimating the "allowable cut," the Applegate working circle was authorized to harvest 20 million (of the whole Crater Forest's 104.5 million) board feet of timber annually. But the only sale plans mentioned were in the Prospect and Butte Falls working circles. There is no sign that anywhere near the allowable cut was harvested in the Applegate until after the Second World War.[193]

The same shortfall, though to a lesser degree, was true of the Crater/Rogue Forest as a whole during the 1920s and '30s. Despite accelerated logging of prime old-growth timber in the southern Cascades, the 1927 forest-wide cut was only 31 million board feet in 1927, 73 million in 1928 and 62 million in 1929. In 1930, after the Wall Street stock market crash and the onset of the Great Depression, the cut dropped precipitously to six million. It rose to about eleven million in 1931,

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[191]Brown, *Rogue River*, I, p. 167.

[192]B.E. Hoffman, "Report Covering the Applegate River and Bear Creek Districts", S-Reconnaissance, Crater National Forest, 1915, p.14.

[193]Brown, *Rogue River*, I, pp. 243-4.

but then dropped even farther to just over one million in 1932, in the depths of the Depression.[194] Based on admittedly incomplete evidence, we would estimate that the Applegate region contributed almost nothing to these already modest logging quantities on the Rogue River National Forest.

"It will be impossible to make any disposal of the mature timber, except on a small scale through small local sales."

What made logging economical in the southern Cascades during the 'twenties and 'thirties was the railroad. Most major timber sales involved the building of a short line to the logging site itself. That the Applegate had no railroad through it seemed an insurmountable obstacle to opening its federal lands up to timber operations. The 1915 Crater Reconnaissance report recognized the problem explicitly:

> In the event a railroad is extended through the Applegate Valley, the demand for limited quantities of timber along the right of way will increase but it will be necessary to wait until the more valuable bodies of timber in other portions of the Forest are sold before any large sales can be proposed. The largest bodies of Government timber lie at the headwaters of the Applegate River over thirty miles from the nearest railroad.

This report thought it "probable" that a railroad would be constructed "through the Applegate valley to the coast." But high projected costs had stalled the project:

> The country is quite rough and it is believed that the cost of the main tap lines would cost $ 1,000 or over per mile.[195]

It may be that this report was speculating on the basis of one of the early attempts, being made at that time, to open the Applegate District's timber supplies to railroad transportation. In 1911, Spencer Bullis, of the Barnsdall Oil Company, bought the Sterling Mine. Originally from New York, Bullis had been involved in a variety of timber, transportation and electric transmission projects from New York to Texas. Along with purchasing the Sterling Mine, Bullis purchased the Southern Oregon Traction Company, which was in the process of developing a Medford trolley system. He then purchased the Rogue River Valley Railroad, which ran from Medford to Jacksonville, and electrified it.

All this activity raised hopes. "Inasmuch as Bullis owned the Sterling Mine, it was confidently predicted that an extension would soon be built to the mine." Instead, Bullis formed the Bullis Logging Company, built a mill near the railroad in Medford, and began extending his line beyond Jacksonville, hoping to forge a link with the coast. Subsequent events—primarily the difficulty of a Smith River route, an adverse Oregon Supreme Court ruling, high labor costs and the material priorities of World War I—conspired to doom the Bullis dream of empire. By 1920, Bullis had divested most of his southern Oregon property.[196]

The failure of the Bullis railroad project guaranteed that federal timberlands in both the Applegate and Illinois watersheds would be left largely intact until the development of an extensive road system in the 1950s. Toward the end of this era, however, an impressive beginning was made on such a road system by the Civilian Conservation Corps.

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194 Ibid., pp. 240, 243, 250, 256, 260, 263.

195 Hoffman, Reconnaissance, p. 13-15.

196 Haines and Smith, *Gold*, pp. 84-6.

"Simple work" with the CCC

President Roosevelt's New Deal inaugurated the Civilian Conservation Corps in 1933, at the depths of the Depression, as an emergency work program to be administered by the War Department. He envisioned it doing "simple work" confined to "forestry, the prevention of soil erosion, flood control, and similar projects" as ways to "conserve our precious natural resources." General Douglas MacArthur quickly established a system that would distribute about 300,000 single men between the ages of 18 and 25 to 1,500 work camps across the country. Twenty-six thousand men were to be assigned to camps in Oregon. Three thousand of these were assigned to the CCC's Medford district, which eventually included eastern Oregon as well as a stretch of territory north to Eugene and south to Redding.[197] In exchange for their work, enrollees received food, clothing, shelter and $30 per month. Of that, they were required to send $25 or more each month to a dependent.[198]

Jackson County hosted over a dozen CCC camps during the 30s, "scattered from the Applegate Valley to Union Creek."[199] In 1939, there were two CCC camps, each containing about two hundred men, on the Rogue River National Forest. The Army fed and sheltered them, and the Forest Service kept them busy. During fire season, they were prepared to drop everything and join fire-fighting crews, as they did for the five-week fire near Bandon in 1936 as well as other major Oregon fires.[200] Due to their efforts, "despite the large number of fires, losses in timber on national forest acres were kept lower than in earlier years."[201]

When they weren't fighting fires, CCC crews built telephone lines, roads, trails, buildings and campgrounds, and worked in a variety of reforestation, disease control, range improvement, soil erosion control and other projects. The Forest Service reported that, on the Rogue Forest, from twenty to forty men were employed in road construction and maintenance each season.[202]

The first camp established by the Medford district of the CCC, and the first CCC camp in all of Oregon, was called Camp Applegate.[203] It was located at Seattle Bar, on the upper reaches of the Applegate River near the California border. In time, other camps were built at Grayback Creek and near the Sturgis Guard Station on Carberry Creek. The Applegate's CCC crews built public campgrounds at Hutton, Cook-and-Green, Beaver-Sulphur and McKee Bridge, and did major improvements at the Star Gulch Ranger Station. In Oregon as a whole, forest road construction accounted for over half of the total activity of the CCC. Key road-building projects in the Applegate were the Thompson Ridge Road, the Little Applegate Road, the Beaver Creek to Mount Ashland Loop Road, and the Middle Fork road.[204] The CCC also built new roads linking the Applegate Valley with Talent, Phoenix and Medford.[205]

197Medford District CCC pamphlet from Rogue River National Forest historical files, pp. 24-5, 27.

198Otis et al, pp. 6-7.

199Dunn, *Land in Common*, p. 98.

200Medford District CCC pamphlet, p. 28.

201Otis et al., p. 46.

202*General National Forest Information*, pp. 2-3.

203 LaLande, personal communication.

204LaLande, *Prehistory and Hist*, p. 40, and Otis et al., pp. 45-6.

205LaLande, *Little Applegate*, p. 15.

Josephine County hosted five CCC forestry camps: Williams, Kerby, Rand, Caves Camp and Mt. Reuben. According to one account, seventy men from homes within the county were enrolled in the Kerby camp. Although they built a number of dwellings, shed and latrines, and strung miles of telephone wire, road-building was their priority as well. Among their projects was a Swede Basin road project. A satellite camp at Waldo, said a Forest Service report, "has given good account of itself on the construction of the road up toward Sanger Peak."[206]

The CCC's roads were primarily defended as offering access for fire-fighting purposes. But they reflected road-building's historic logic, applicable to everything from trails to freeways: they attracted travel to places that the public had never had the urge to visit before the roads existed. An Oregon forester stated the principle:

> Motorists and campers moved into areas previously unreachable or discovered alternative shortcuts to favored recreation spots. . . . Where there are roads, you'll find the public.[207]

That portion of the public to which the CCC roads came as a godsend was the timber industry. CCC roads compensated for the absent railroad by providing key trunk lines to make accessible the farther reaches of the Applegate drainage. By 1942, when World War II offered its much more comprehensive and successful resolution of the unemployment problem and the CCC was disbanded, the landscape of the upper Applegate was prepared for a post-war world which made its timber resources suddenly more valuable than the Pursels and the Pullens had ever imagined possible. The CCC created the thoroughfares on which the Applegate's trees would join the younger generation of Americans as they moved to the big city in the years following World War II.

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[206]Hill, *Josephine*, II, pp. 58-59.

[207]quoted in Otis et al., p. 46.

The Look of the Land

Water Stories

Lewis Stidham was born in 1908 in Grants Pass. Here's what he remembers, and what he thinks about it all.

> You know, in those days there were lots of fish in this river of ours [Rogue]. I don't know how these environmentalists and the fish finally all got together, but anyway, there are no fish in the river like there were then. I don't understand, because we'd go by the City Market along Fifth Street, and there was an iron door thing over the sidewalk there, and an elevator that would come up from the basement, and the fellows would come up alongside with their boats. There would be boat after boat, and they would be loaded with thousands of salmon that had been taken from the river.
>
> They say, well, there are more people fishing. Maybe, but no net fishing now. Why don't we have fish? Not because the river isn't clear! Then, in the spring, you could go down and see the river just red with mud, because the placer mines were doing all their cleaning up at that time of year. It certainly didn't seem to hurt any of the fish then. Bosh, when that water cleared up you could go down and catch yourself a mess of trout anytime. . . .
>
> I kind of think maybe the environmentalists got too far along, because I think that dirty water didn't hurt the trout: gave them a chance to spawn. You could go down to the old railroad bridge and climb down on that lower pier, and you were always sure of catching a bunch of trout. You could go anywhere on the river; just good fishing in the Rogue generally; and from the number of salmon they took out in nets! Well, it took an awful lot of fish to fill those nets![208]

Topsoil

The years from 1900 through 1945, arguably, saw grazing reach its zenith in both its distribution and numbers of head foraging on the public lands. With annual frequency in most prime areas, and a brief return interval, the severity of grazing as a disturbance was particularly noteworthy. According to Atzet, "By 1917 most meadows along the Siskiyou crest were 'badly depleted'. . . many areas along the crest continue to be in poor condition."[209]

At the time Ranger Gribble and others originally noticed the severity of disturbance, their concern was overgrazing as it impacted grasses and other browse for cattle, sheep, and goats. Hence, the need for reseeding was a common prescription. Overgrazing as primarily a concern of food supply continued well past Gribble's time. It has led to an exploration of the significant role of cattle in spreading introduced flora, and to studies addressing the different grazing patterns and effects of sheep and cattle. Today, however, studies addressing the impact of grazing focus upon a different type of disturbance, that of soil compaction.

As many thoughtful observers are becoming increasingly aware, soils are a key component in forest health and diversity. "In temperate forests most of the nutrients and organic matter in the

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[208]Hill, *Josephine*, 1976, p. 87.

[209]Atzet and Wheeler, "Fire Activity", p. 5.

system is in the topsoil."[210] It is here that bacterial and fungal systems of decomposition break organic and inorganic matter into the nutrients trees are able to use for nourishment. Grazing, or perhaps more correctly, over-grazing, has impacted these systems in two primary ways. First, overgrazing reduces organic deposition on the forest floor, depriving the system of needed organic matter. Second, overgrazing alters the floor of the forest through compaction, a disturbance of even greater severity in the forest ecosystem.

Soil compaction happens in several ways. First, topsoils can be altered in their basic structure due to compaction. This greatly diminishes the ability of the soil to act as a reservoir. According to studies by Furniss, solids take up only 43% of the space in forest soils. The remainder is taken up by water. Gravity water, or water that drains into watersheds, takes up about 28%, while capillary water, or water held by the soil and made available to plants, takes up about 29%. As soils are compacted, capillary capacity is reduced, and more water is lost to gravity drainage, not only depriving plants of moisture, but further disturbing the system by increasing water run-off and erosion.

Secondly, as soils are compacted the ability of mycorrhizal fungi to function in distributing nutrition is diminished.[211] These fungi are key components in the nutrient web spread across the forest floor. They are essential for trees to access required minerals, breaking minerals into forms trees are able to utilize. In a related manner, as compaction inhibits the ability of mycorrhizal fungi to break down nutrients, it seems to allow a window for bacterial based decomposition to continue. Bacterial decomposition is that associated with grasslands. As forest soils experience compaction, there is evidence that they transition into a decomposition process more oriented toward grassland than forest. Hence, in areas of severe disturbance, forest growth is inhibited due to the fact that the decomposition process previously upholding it has been replaced by a process more conducive to grasslands.[212]

Although it is difficult to reconstruct the effects of grazing during the first half of the twentieth century with exacting detail, it is not difficult to imagine a contribution to soil compaction by millions of grazing ungulates. Given that soil science's attention to compaction is still largely in its infancy, it would not be unwarranted to assume that grazing in the earlier part of the twentieth century has altered forest processes in ways scientists are just beginning to understand.

Transitioning

It may be an overgeneralization to reflect back and label this era as one of stability and moderation, but in light of more recent events which we now have the benefit of viewing in hindsight, these are characteristics which easily suggest themselves. As this era drew to a close, and the study area lay on the verge of a post-WW II logging boom and population influx.

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[210]Mike Furniss, "Watershed Analysis and the Importance of Topsoil," *Headwaters Journal*, Spring 1994, p. 16.

[211]Richard Hart, personal communication.

[212]Elaine Ingham, "Soil Organisms and Forest Health," *Headwaters Journal*, Spring 1994, p. 12.

CHAPTER FOUR

NEW INVASIONS: 1945-1995

The Second World War was the central convulsion of our century, a marker of endings and beginnings for the people living in the Illinois and Applegate Valleys.

For the young, who went to war and didn't return, and for the ones who loved them, it was an ending. The end, too, of the bitter, hopeless years known as the Great Depression. With that, the end of the last great gold-mining boom, almost a hundred years after the first. And, although most couldn't have seen it clearly at the time, it marked the end of that steady pace of life defined by the rhythms of livestock ranches and family farms.

The new beginnings saw to that. The sudden boom in timber production of the latter war years foretold the onset of an economy paced by chainsaws and caterpillar tractors more than by horses and hay rakes. The era of relative prosperity inaugurated by the war, setting new records in the construction of homes and the creation of businesses, also helped shape a population with higher expectations for a way of life. New visions of spacious country living, new anxieties about social and cultural decay, fueled a new migration into the scenic gulches of the Siskiyou Mountains. Together, these endings and beginnings would re-shape the environment of the Applegate and Illinois Valleys as dramatically as had the endings and beginnings of an earlier influx a century before.

Before recounting these changes, we pause to consider the human shape of endings and beginnings.

Lives on and off the Land

You remember Bill Smith. He's the clever fellow who figured out how to capture other people's dirt and turn his rock tailings into a hay field. Bill and his wife, Emma, had three sons in the 1890s. One of them was Clyde. Clyde married Mildred Sweet in 1920, and they had seven children. The first four were girls, the last three boys. Clyde got a job with the Forest Service that took him to Crater Lake and Soda Springs. But he came back to "take charge of the farm" in 1943. It was wartime, and the country needed food, so farmers were generally supplied with whatever they needed for farming. Clyde thought he needed a house. The War Production Board agreed, approving Clyde's request for lumber.

Clyde and Mildred built their place, a small house "on the hill across the road from Bill and Emma's home. The older girls grew up and left home. Clyde continued farming for about fifteen years." Emma died in 1948, Bill in 1951. They were buried in the Logtown cemetery. In 1955, Clyde went back to work for the Forest Service, staffing the lookout at Tallowbox. He was 59 years old. Two years later, Clyde died. Endings: "Mildred sold the farm and moved to Jacksonville." John and Marguerite Black write the epitaph on a century of life on the land: "Family ownership of the farm came to an end."[1]

The story is repeated in other Illinois and Applegate Valley families. The end of the farm, the subdivision of the ranch, retirement in the city -- or on the remaining fragment of the old place after the rest has been sold off so newcomers could build their country dream homes. The Sam Phillips ranch, for example, comprising a piece of the ranch on which Arthur Kleinhammer had

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[1]Black and Black, *Ruch*, pp. 89-90.

prospered early in this century, was sold to a land developer in 1970s. "To make the best use of the river frontage," John and Marguerite Black tell us,

> this developer had the county relocate the road across one of the largest and best farm fields. Handsome rural homes were built along the river and on the hillsides overlooking the valley. Several of these residents carry on some hobby farming with horses, a few cattle and other animals. The farm fields which remain provide hay and pasture. This is still a beautiful area to visit any time of the year.[2]

In the second half of the twentieth century, it seems, the Applegate and Illinois Valleys were "discovered" once again, as they had been in the 1850s—indeed, as America itself had been some three centuries before that. As in the earlier discoveries, though, there were people already living on the land. These people were not at first altogether certain that their discovery was a bad thing. Prominent families in the ranching community invited the newcomers to share the bounty of their lands. Perhaps they figured there was more than enough to go around. The native peoples of this continent had often enough, for reasons we may even find laudable, miscalculated in similar ways.

The Offenbacher clan, part of Applegate life since the nineteenth century, offers another example. John and Marguerite Black put it succinctly:

> For three generations, the Offenbacher family operated some of the most prosperous and successful ranches in the area. Some of the original acreage has now been subdivided. The remaining fields are being farmed by Fred (Fritz) and his nephews. Several family members have retirement homes in the area.[3]

Dutch Offenbacher is one of those family members. His retirement home is on the remaining corner of his family's ranch along the highway between Ruch and Applegate. He speaks wistfully of what has been lost:

> If you could envision . . . . All these ranches in here ran cattle, not just my dad. And there's only about three ranches left on the Applegate that run cattle in the high mountains on the open range. At that time, several of the outfits would get together, group their cattle together and move them in one mass. Well, you're looking at five to seven hundred head of cattle strung out up this road to that mountain.
>
> By the time I was big enough to set in the saddle, why, I was part of it. I didn't always do too much, I just maybe rode along when I was five years old, but I was involved. They would be strung out for three or four miles. They would break them in groups to move them. There wasn't the dogs, there wasn't the kids, there wasn't the houses, there wasn't the people. This was a ranching community in those days. The only homes out here basically were those that owned a ranch. You knew everybody. In fact, I was related to maybe half of them at one time.
>
> Now, it's a bedroom community. The ranching is marginal. It's changed hands. Most people who own a ranch out here now of any size came from California or Washington or some other place and they want to retire here. The ranch I think in many cases is more of a burden to them than an asset.[4]

Dutch Offenbacher remembers that it was the 'fifties and early 'sixties when the trend became noticeable. "People started moving back here in the mountains," he says. They wanted a rural way of life, but they didn't particularly want cattle in their frontyards, so they began to pass herd laws that closed the range and made the ranchers responsible for damages caused by their cattle.

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[2]Ibid., p. 107.

[3]Ibid., p. 170.

[4]This quotation and all succeeding references to Dutch Offenbacher draw on authors' interview with him, May 22, 1995.

"This used to be open range right here. All up and down this country the cow had the right of way," Dutch Offenbacher says. Of course, the roads on which his family and the other ranchers would drive their herds into the upper Applegate always had some dwellings along them. His uncle owned a ranch above the Star Ranger Station, the Winninghams lived along the road, several families lived around the McKee Bridge store. But these were ranching families.

> There's a difference now. They knew when we came they'd shut their gates so our cattle wouldn't get in, or they'd just stand out there quietly and hold their dogs back. Now you've got dogs coming out of those places and your cattle. . . it would be prohibitive, I believe. You just couldn't get enough cowboys to run a bunch of cattle up there. You'd hold traffic up for miles.

Offenbacher says there are only a few ranching families left in the Applegate. Morris Byrnes and Freddie Straub are the only two who still run cattle on the same range that Dutch's father used around Donomore Meadows. Dave Winningham runs cattle in the Whisky Creek area and GMW runs cattle in Elliott Creek. Phil Krause uses the range on Grayback. But the last cattle drive up the major Applegate artery was in the mid-1950s. (Besides the influx of new settlement less sympathetic to the cattle drive, and lack of cowboys to actually do the work, the prevalence of roads in the area has also made cattle transport more cost-effective via truck.)

> There's only three or four actual working ranches that people have to make a living on and support a family and pay the taxes off of the land. That's all that's left out here. This guy over here across the river, across from my place, owns a shopping center in San Jose. The guy over here on this side made a beaucoup of bucks in California and moved up here and started a dairy. So, it's great for people in town to drive out here and look at these fields and say 'isn't this wonderful out here in the farming country.' Well, they gotta understand that people can't make a living here anymore. You just can't do it. . . . Unless you're a lot better rancher than I was.
>
> So, what do you do with it. You got a guy that's got a ranch, that's great. Now what's he gonna do with it? He's gonna have to sell it to a guy that's got some money to support that ranch in order to keep it as a ranch. You cannot farm it and make a living. You cannot do it.

Dutch Offenbacher says he's "most certainly" sorry to see the Applegate's ranching days go by. "The little ranch to me was the backbone of the country," he says. "It's how people was able to come here, settle, raise a family, pay their taxes. This is what settled the country." Now, that life is gone. A little ranching still happens in the Applegate, but ranching as a way of life is gone.

The decline of the ranching life since World War II was paralleled by the rise of the logging life. But hidden within that new beginning was also an ending. When the American economy shifted into high gear after the war, multiplying "Levittowns"[5] across the land, the Forest Service and the BLM shifted into high gear too, and small lumber mills multiplied on the public forest lands. In the Applegate Valley alone, fifteen relatively small mills hummed along in the late 1940s.[6] Forty years later, none remained. The forests were still making their way to the mills, at record rates, but those mills were in Grants Pass and Medford. The brief proliferation of timber mills on the Applegate and Illinois valley floors had come and almost gone. By the 1980s, if you lived in the study area and worked in a lumber mill, it most likely meant you were a commuter. You joined the flow of traffic, including the logs trucks that rumbled past your rural home, and went off to a neighboring city to both earn and spend your money.

Meanwhile, the residents of those neighboring cities, and many cities farther afield, made their way to your backyard. With prosperity came the itch to travel, to explore new terrain, to catch the

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[5] "Levittowns" refer to the post-WW II suburb: clumpings of middle-class, mass-produced, single-family dwellings outside the urban core. The name derives from the originators of the concept -- and developers of Levittown, N.Y. on Long Island -- Levitt and Sons, Inc.

[6] LaLande, *Prehistory and History*, p. 96.

sunset over the next ridge or coax your four sturdy wheels across forbidding landscape. Large-scale recreation dawned in the Siskiyous at mid-century, and increased with each decade, encouraged by the logging roads that each year snaked their way farther into the remote reaches of the study area. Building the roads, administering timber sales, harvesting trees, treating logged acreage, catering to the tourists—all these required increased staffing levels in the federal agencies. More people by day in the offices, by day and night in the forests and on the highways. Human activity expanded geometrically.

What would time-lapse photography from space show us, if it could trace the paths of each human being on the land?

In 1940, the scurrying of scattered miners alone or in pairs along isolated stream courses; the movement of cattle and, infrequently, men and women on horseback gathering and sorting them—the highways still quiet enough to accommodate semi-annual cattle drives; the mounted ranger keeping watch, gathering little bands of neighbors at ignition points to contain small fires; a logger here and there, dragging out the biggest trees by horse or ox or tractor; groups of CCC boys pushing the first serious roads into remote canyons.

In 1980, an anthill of human activity. New homes filling in the spaces along major and minor roads, major and minor creeks; new cars clogging the highways; refurbished miners' cabins and hastily built shacks occupied by back-to-the-landers in flight from San Francisco and every other large city, tending their children and their alternative crops with solicitude; hotspots of human activity beginning to coalesce around the newly-formed Applegate Reservoir and the modernized facilities at the Oregon Caves; vineyards spreading across meadows and up hillsides; commercial centers growing, with tourists on their mind.

In the forests, roads pushed along the ridges, up the drainages, a vast network of roads dissecting a once-unbroken forest into little patches; many of those patches denuded, some brushy, some all but barren, many sprouting trees. Along the roads and in the patches, human beings driving, walking, counting, planting, fingering the land, weighing the results of three decades of intensive logging, plotting a future for the forests. Along the roads and in the patches, humans beings astride giant machines, cutting, clearing, piling, hauling, dragging, moving forests off their hillsides and into town. The Siskiyou Mountains, seemingly remote from the bustling urban capitals of mass society, but bustling in their own way, the human servants of distant bureaucracies spread liberally across the land, leaving their footsteps and other tokens of the era of heightened supply and demand upon the landscape.

The most powerful humans, those who left the largest marks on the land, were commuters in body and, painfully, often in spirit as well. As Carlos Schwantes has put it, the Pacific Northwest is a "colonial hinterland." It supplies the raw materials for "the continent's centers of economic and political power."[7] Its geographic remoteness bespeaks a deeper separation. Though it fuels national destiny, the region has historically been left out of full participation in national decision-making.

And our study area itself, lying on the fringes of southern Oregon's timber economy, comprises a hinterland within a hinterland. Resource decisions made in Washington, D.C. are funneled through Portland, Medford and Grants Pass. The fate of local watersheds hinges on decisions made in distant offices. When the humans moving in unprecedented profusion on the landscape pledge their allegiance, they must face in two quite opposite directions: subserviently toward distant centers of power, and humbly toward the land itself. Our time-lapse picture of the Applegate and Illinois drainages in 1980 reveals purposeful human beings crawling over the landscape, pushing confidently ahead. It cannot show the ambivalence in their heads or the turmoil in their hearts.

Another era of endings and beginnings in the Siskiyous.

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[7]Schwantes, *The Pacific Northwest*, p. 32.

"Rapid Liquidation"

> Every previous major economic regime in southern Oregon had moved to the rhythm of boom and bust. Why should logging be exempt?

When the Siskiyou National Forest put together its "Timber Disposal Program" in 1947, it found eighty-two lumber mills in Josephine County "with more being built." Most of the mills were small, cutting less that 25 MBF per day. "Private stumpage is very limited," it said. "Young pole stands are suffering as the majority of operators are cutting heavily to utilize all available stumpage. Forest Service timber will be increasingly in demand as the private timber becomes exhausted."[8] By 1954, Siskiyou Forest managers would report that installed-plant capacity in Illinois Valley lumber mills exceeded the timber supply. "The process of elimination among the more inefficient mills as competition for logs becomes more keen has already begun," it reported, "especially in the Illinois Valley and Rogue River valley areas."[9]

In the early 1950s, managers at the Rogue River National Forest counted 91 mills operating in Jackson County. Medford alone had eight fairly large mills, among them the Medford Corporation, Kogap Lumber, Elk Lumber and Timber Products. Tiny Ashland sported eighteen mills of various sizes. Other mills were scattered throughout the valley in places like Central Point, White City, Eagle Point, Butte Falls, Rogue River, Gold Hill, Prospect and Trail.

In the Applegate Valley, the Hunter and Best Lumber Company was the only "large" mill. Keeping it running required about 20 MMBF annually. (To keep this in perspective, Medford Corporation, in the 1930s, milled 250 MBF per shift. [10]) Another fifteen small mills could utilize up to 5 MMBF annually. But the Applegate portion of Jackson County's annual milling capacity was minuscule. Its 25 MMBF was dwarfed by Medford's 234 MMBF of annual capacity, and the County's cumulative 545 MMBF of log capacity.[11]

It would not be long before most of the study area's small mills were history. As LaLande puts it, "the attrition rate of these family-owned operations soared in the mid-1950's, following the arrival of the large, diversified wood products manufacturers in Jackson County."[12] Over the course of the next decade or two, "large lumber companies such as Georgia-Pacific, U.S. Plywood, Weyerhauser, and Roseburg Lumber, gained control of the bulk of cutting and lumber production" in southern Oregon. Their

> ability to respond to market fluctuations, to replenish logged-off timber, to bid on federal timber, to modernize milling facilities—all of these gave the large firms the edge in one of the region's most important economic forces.[13]

All this was evident by the late 1978, when a Rogue River National Forest Management Plan judged that "the region's big boom period" had already come to an end. In a mere quarter-century, from 1946 to 1969, southern Oregon had seen the "rapid liquidation of commercial-sized timber from private lands." The document quoted an independent report that "the Medford timbershed is

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[8]Siskiyou National Forest, "Timber Disposal Program," 1947, p.1.

[9]Siskiyou National Forest, "Timber Management Program," 1954, p.5.

[10] LaLande, personal communication.

[11]Rogue River National Forest, "Management Plan," 1954, "Table I - Installed Capacity and Annual Log Requirements."

[12]LaLande, *Prehistory and History*, p. 96.

[13]Beckham, *Siskiyou National Forest*, p. 132.

rapidly losing its forested area. Many of the small companies which cut the timber on much of Jackson County's private land area have since closed or sold out to the larger corporations during the past 25-30 years."

So the specter of "increasing timber shortage" already loomed. As the Plan put it, "the timber industry in southwest Oregon has entered a period of consolidation . . . , characterized by replacement of the numerous, small mills by fewer, larger, corporately-owned operations; and by increasing automation which reduces manpower needs." Only eight medium-to-large capacity mills remained in the mid-70s, and an additional thirteen veneer, plywood, particle board plants. "Many small, locally-owned, single-product mills are finding it increasingly difficult to compete," the Forest Service reported. What did the future hold? Increasing automation, decreased need for human labor, and "further mill closures," especially of locally-owned, technologically out-dated mills. The surviving mills would be "the high-technology, automated operations with enough flexibility to ride on investment in markets three to five years in the future."[14]

A few firms remained through most of the period. Many of the federal timber sales in the Applegate region went to Murphy Creek/Mountain Fir, which bucked the conventional wisdom by favoring the so-called "inferior" timber of the Applegate area, with its slower growth and tighter grain.[15] The Krauss family continued to provide employment in the timber industry at several locations in the Illinois Valley. According to Bengt "Ben" Hamner, of the Rogue River National Forest, many of the logging companies that did the actual timber harvesting on the land were locally owned in the Applegate Valley, although a similar attrition thinned their ranks over the period. The consolidation of many small operators into several large operators, a pattern that had characterized the mining business by the end of the nineteenth century, was directing the lumber business by the end of the twentieth.

A New Player in the Game: the BLM

The Legacy of the Railroads

Among the 130 million acres west of the Mississippi that the federal government gave to private companies to stimulate road and railroad transportation were 3.7 million acres designated for a railroad to run the length of Oregon and provide a link to California. The grantees, soon to be known as the Oregon and California Railroad Company, were directed to sell land only to "actual settlers" in lots no larger than 160 acres and for no more than $2.50 per acre. The money received was meant to build the railroad.[16]

In the nineteenth century, the land sold slowly, out-competed by free homestead land in more suitable farming landscapes. In 1873, the undercapitalized O&C Railroad Company defaulted on its loans and reorganized financially. In 1887, again in crisis, it was leased to the Southern Pacific, which completed the line to the California border and presided over the party in Ashland that celebrated the driving of the Golden Spike.

Instead of selling its lands to settlers and small farmers, the Southern Pacific distributed them to the highest bidders, often corporations such as the Booth-Kelly Lumber Company.[17] Growing outrage over land fraud in Oregon, resulting in a series of trials of Oregon congressmen and GLO

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[14] *Final Environmental Statement - 10-Year Timber Management Plan*, Timber Management Section, Rogue River National Forest, 1978, pp. 71-74.

[15] Ben Hamner, Interview with authors, June 6, 1995.

[16] O&C Pamphlet, p. 6.

[17] Beckham, *Siskiyou National Forest*, p. 148.

officials, drew attention to the fact that the Southern Pacific was not been meeting the requirements of the 1866 Oregon and California Railroad Act for the disposal of its lands. In 1916, Congress "revested," or reclaimed, unsold O&C lands totaling 2.8 million acres.[18]

Had this land originally remained in federal government hands, much of it might have been transferred to private ownership under homestead and other land laws in the last third of the nineteenth century—at least until the conservation fever ended public land sales at the turn of the century. As settled properties, they would have contributed tax revenues to the counties of western Oregon. But revesting them in 1916 virtually assured that they would remain under federal control in perpetuity. In response, the newly-formed Association of O & C Counties pressed Congress for some financial benefit from these forfeited railroad grant lands. The result of their lobbying, and of growing concern in the 1930s over the GLO's inability to sell enough timber to generate significant revenue, was the O&C Act of 1937.[19]

The full name of this law emphasized its primary function: "The Oregon and California Revested Lands Sustained Yield Management Act of August 28, 1937." It directed the Interior Department to manage the O&C lands "for permanent forest production . . . in conformity with the principle of sustained yield." It was to determine "allowable cuts" of timber, protect watersheds, regulate stream flow, contribute to local economic stability, and provide recreational facilities for the public. Revenues from the sale of timber were to be distributed among the eighteen O&C Counties (50%) and to the federal government (50%) in reimbursement for previous payments (in lieu of tax revenues) to the counties, and for managing these lands. Chief Forester of the O&C lands, Walter Horning, took up his duties in June, 1938, in Portland, and opened four district offices. One of them was in Medford, where Otto Krueger served as the first district forester.[20] His assistant, Gene Peterson, took over as district forester in 1939, and then as district manager from 1945 until 1957.

Peterson remembers those early days. The entire Medford District staff numbered two—himself and Krueger. Their mandate was to sell timber, but to do so in a way that would guarantee a "sustained yield" of timber perpetually in southwest Oregon. During Peterson's tenure at the Medford District, the problem of sustaining the yield over time seemed minor in comparison to the problem of selling timber. "Our first job here was to persuade somebody to buy some O & C timber," Peterson recalls. In 1939, no one seemed to want it. Northern Oregon mills, drawing on "the finest old growth timber that ever existed on earth," were adequate to supply all the Douglas-fir that the relatively depressed market of the late 1930s could put to use. Southern Oregon Douglas-fir was considered inferior. But he and Krueger had had some experience in pine forestlands, so they were brought in to develop the small market that did exist for southern Oregon ponderosa and sugar pine, particularly for fruit boxes and finish lumber. They set the minimum prices: sugar pine at $4 per thousand, ponderosa pine at $3.50, and Douglas-fir at a paltry $1.25.[21]

Even so, they got off to a very slow start. Their first sale on the west side was in Sections 13, 23, and 27 of T38S/R8W, in the Selma area, all ponderosa pine. The Krauss family logged it. During the war, Jack Villair was first to buy O&C timber in the upper Illinois Valley. About the same time, Spalding and Sons in Grants Pass logged a "fine stand of sugar pine in the Swede Basin" on O&C land west of Hayes Hill. Around 1940, the Interior Department operated a CCC camp at Williams,

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[18]O&C Pamphlet, pp. 7, 9, 10.

[19]O&C Pamphlet, p. 11; James Muhn and Hanson R. Stuart, *Opportunity and Challenge: The Story of the BLM* (Washington, D.C.: United States Department of the Interior, Bureau of Land Management, 1988), p. 43.

[20]Muhn and Stuart, *Opportunity*, pp. 11, 13-14.

[21]These remarks and all succeeding reference to Gene Peterson draw on authors' interview with him on May 25, 1995.

and installed a small sawmill to cut Port Orford cedar and Douglas-fir for building military revetments at the Medford airport. The timber came out of the mountains above Williams in the Munger Creek drainage. Peterson also remembers several early sales on Reeves Creek of perhaps three or four MMBF and some early ponderosa pine logging by Charlie Skeeter in the Wagner Creek drainage (on Arrastra Creek), adjacent to the study area.

The impact of these early sales on the landscape was arguably minimal. Krueger and Peterson were the entire staff. "We did the whole works," Peterson says. They laid out the sale and marked each tree to be cut with the "US" mark. "I marked them myself," Peterson says, using the Keene tree classification system of measuring crown vigor. Trees that were growing vigorously were left standing. The larger, older trees, amounting on average to between 40 and 60% of the stand's basal area, were taken. Peterson says he ordinarily allowed the loggers to cut nothing under 28" dbh (diameter-breast-height). He says, it was

> only natural to take the oldest trees and try to concentrate on those because generally speaking that's where the highest value occurred. There was always a premium on clear lumber, maybe more than now.

"We established this individual tree selection as the basis of all cutting in the Medford District," Peterson recalls.

New Agency, New Demands

In 1946, Gene Peterson found himself working for a new agency. The Bureau of Land Management was formed in that year by the merger of the General Land Office and the U.S. Grazing Service. Marion Clawson was brought in as BLM director in 1948, with a mandate to "get some old blood out" of the agency and re-shape it into a modern management organization. He, in turn, named forestry economist Dan Goldy to the post of Northwest regional administrator of the BLM. Goldy's orders were to economize the forest: to turn the rich timber reserves of the O&C lands into revenue for both the federal government and the O&C counties—without, of course, damaging the forests' ability to continue producing a "sustained yield" of timber throughout the years to come. Among his first acts, Goldy ended the inherited practice of 100-year cooperative management agreements with private landowners, which seemed to give monopoly rights over federal timber to large timber industry interests.

Effectively, 1950 inaugurated the BLM's timber management boom years, an amazingly brief period in light of the changes it was able to effect on the land. That was the year of the first competitive sales under the new Clawson/Goldy regime, and the year the annual timber harvests on O&C land began to climb. Between 1947 and 1952, statewide, allowable cuts were around 650 MMBF, although actual sales were only in the 450 MMBF range. The sharpest rises in the allowable cut were in 1958, 1959 and 1960, and in each of these years actual sales exceeded the allowable cut. By 1960, the O&C's allowable cut statewide was about a billion board feet, and in 1962 it was raised to 1.1 billion.

In 1953, President Eisenhower appointed Oregon Governor Douglas McKay as Secretary of Interior with the purpose of expanding commodity extraction on the public lands. McKay put his public lands policy this way: "We're here in the saddle as an administration representing business and industry."

McKay replaced Marion Clawson, whose commitment to careful planning of resource use earned him a reputation among Republicans as a socialist, with Idahoan Edward Woozley. Woozley promised that

> the full worth of the valuable resources on the public lands [would] be realized with a minimum expense to the taxpayer and that through careful cooperation with private enterprise, these lands would produce the products on which local, state, and national economy depend.

Woozley instantly succumbed to pressure from the O&C Counties to raise the allowable cut. He also inaugurated the era of widespread clear-cutting, eliminating the previous administration's 40-acre restriction on clear-cuts.[22]

Gene Peterson remembers that the pressure to meet the rising allowable cut had already begun intensifying after 1948. The laissez-faire administrative style of the Horning period gave way to a new emphasis on "getting maximum returns." This meant, especially during the 1950s, pressure to succumb to the new orthodoxy in the forestry schools that dictated clear-cutting of older forests so they could be replaced by vigorous young tree plantations. Peterson had his doubts.

> I soon discovered that the forest silvicultural orthodoxy that we learned at college didn't fit this country. I found we didn't really belong in the Douglas-fir region. It was more like northern California, transition country between the Douglas-fir region and the pine region. So we had to develop our own approach, and we did.

This meant bucking headquarters, which was trying to dictate forestry practice across the region. Peterson:

> The forest practices that they determined in the regional office were a kind of orthodoxy for the forestry schools. [But] there was no orthodoxy for this country. . . . The headquarters office people were more traditionally educated and they couldn't comprehend the need for this elaborate type of silviculture that we were applying down here. We marked every individual tree either with an ax or paint and it consumed more time. It was more expensive. And BLM was hard pressed to make ends meet, and pay off [previous grants to the counties] out of our timber receipts.

So Peterson wrote his own district handbook. "A lot of the state handbook and regional office handbook material was silvicultural orthodoxy applied to western Oregon, which was clear-cutting." To finesse the instructions from headquarters to clear-cut, Peterson asked his unit foresters to state how their silvicultural prescriptions were designed to encourage the growth of a young forest. "Since we had no funds for reforestation, that forced [the unit foresters] to leave sufficient shade and sufficient reserve trees to guarantee the establishment of other trees to replace them." "I allowed no clear-cutting of any consequence until I left the district in '57," Peterson says.

When Peterson first came to Medford, the district's allowable cut was about 85 MMBF. By 1950, it reached 125 MMBF, and annual timber sales were beginning to approach the allowable cut. Still, according to Peterson, there were very few timber sales on BLM land in the Illinois or Applegate Valleys during his tenure. The Applegate, particularly, was considered too steep for easy tractor logging, and tractor logging was the only technology used in the 1950s. "The steep ground, we simply avoided," he says. In addition, Applegate timber was scattered and considered to be of poorer quality because of inferior growing conditions. As a result, Peterson estimates that at most the BLM put up only three or four small sales yearly in the Applegate and Illinois Valleys—"no clear cutting, no high-lead logging, all cat logging."

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[22]Material in this and the previous two paragraphs drawn from Muhn and Stuart, *Opportunity*, pp. 13-14, 66-67, 75-77, 82.

In 1960, the BLM's Medford District, which spanned an area from the southern Umpqua River drainage to the California border, raised its allowable cut to 239 MMBF. In the 1960s, the Western Forestry Industries Association pressured the BLM to raise the cut, and in 1970 it reached a high of 274 MMBF, about one-quarter of a new statewide high of 1,172 MMBF.

The new estimates of what the BLM could cut without injuring the sustainability of its forest production were based on "credits" taken in current harvest quantities for the future growth gains that would result from intensive forestry practices like artificial site preparation, thinning, reforestation and fertilizing. This "allowable cut effect" (the Forest Service used the phrase "earned harvest credit" in similar application) increased the annual allowable cut by about 50%. "And of course, key to it was maintaining all the O&C lands in the allowable cut base"—even though many acres, such as the scenic corridor along the Rogue River and later around Hyatt and Howard Prairie Reservoirs, had been withdrawn from harvesting to protect non-commodity values. "That's probably the most potent tool used during the Goldy days," Peterson says—"to count the allowable cut on every acre," even though that meant cutting above sustainable levels on the BLM lands that were designated for harvest. Peterson notes one other change after he left: "And clear-cutting was put in full swing."

Getting It All Together

The O & C lands had been granted in alternate 640-acres sections, on a checkerboard pattern. Many of the interspersed sections of remaining federal land had ended up in the forest reserves established in the 1890s and later enlarged and placed under Forest Service management. The revested O & C lands "had some of the best timber stands in the United States," and in 1916, the Forest Service believed it was the agency best prepared to manage all of them. But Congress put the Interior Department in charge of the revested lands, partly "because of the ill will Oregonians had toward the Forest Service."[23] This meant that for many years the GLO/BLM and the Forest Service would manage intermingled lands.

Throughout the first half of the century, Forest Service records for the Applegate District and other southern Oregon districts reveal ongoing frustration with having to manage lands that were broken up by alternating O & C sections, where management was nonexistent or, in the judgment of the Forest Service, inadequate. The O & C Act of 1937 introduced a new and presumably more responsible management regime on these O & C sections, but it didn't resolve the inevitable management inefficiencies resulting from interspersion.

In 1956, Congress acted to remedy this problem. It directed the BLM and the Forest Service to exchange lands on an approximately equal basis so as to consolidate their holdings for management purposes. In the Applegate, the Forest Service took most of the higher elevation lands and the BLM the lower. This meant that the Rogue River National Forest ended up with Townships 40 and 41 South, except for eleven sections in the Yale Creek and Waters Gulch drainage, and with lands in Township 39 South, around Wagner Gap and in the Ashland watershed. The BLM took the lower elevation Applegate country from near Star Gulch on down to the Rogue River, including the entire Williams drainage. In the Illinois portion of the study area, the Siskiyou National Forest administered the higher elevation lands in Townships 39 and 40 South, Range 6 West (Grayback/Sucker Creek country) and most of Township 41 South. The BLM was given lower elevation portions of Sucker Creek, Althouse Creek and the Illinois River country as well as the lower divides between Sucker and Deer Creeks (around Little Grayback) and the lower divide between the Williams/Murphy Creek and Deer Creek drainages and on north to the Rogue River.

The 1956 law rearranged federal lands in the study area into a configuration that survives to the present. With the consolidation of both BLM and Forest Service acreages into manageable blocks

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[23]Ibid., p. 42.

in both the Applegate and Illinois drainages, the landscape was prepared for a new wave of managers and a new kind of thinking about the requirement of efficiency in the timber business.

The Road-Building Years: Gaining Access

Marion Clawson and Dan Goldy knew that the BLM's timber sales program would not be able to compete with the Forest Service and private industry unless it developed a network of access roads throughout the Bureau's lands. Soon after taking office, therefore, Goldy launched a campaign to acquire reciprocal right-of-way agreements with private landowners, and committed the BLM to an energetic program of road-building. For a while the program was energetic only on paper. The problem was that Congress had been unwilling to appropriate road-building funds. From the beginning of GLO administration of the O&C lands, the only recourse had been for the timber companies to build their own roads, which, as Peterson confirms, partly explains the virtual absence of demand for GLO/BLM timber well into the 1940s.

Clawson described how that changed in the early 1950s:

> One winter an unusually severe storm along the Oregon coast blew down a great deal of timber. In some of these areas an infestation of bugs was already killing live trees. These bugs could thrive even better on blowdown timber and from that base more aggressively infest stands of live trees. The solution was to harvest both blowdown and intermingled standing live trees, as rapidly as possible; and for this access roads were needed.

Congress responded by appropriating several million dollars for road-building. According to Clawson, "this was the beginning of BLM's road-building in the O&C area."[24] A decade later, the ferocious winds of the Columbus Day storm of 1962 demolished 1.5 billion board feet of O&C timber in the space of a few minutes. Again, Congress authorized emergency road construction to salvage the dead and dying. Then, in December 1964, heavy floods wreaked havoc with forest roads in western Oregon, and the Congress appropriated yet more money for emergency road repairs. At that point, the BLM's road program was about to enter its most active decades, and BLM roads were beginning to show on the land.

Gene Peterson knew what Clawson and Goldy knew: that there would not be "much demand for BLM timber until we put in the access roads." During his tenure, however, the BLM's road program in the Applegate and Illinois Valleys was barely begun. By the time John Ifft came to work for the Medford District BLM in the early 1960s, road-building seems to have become the BLM's highest priority. Ifft remembers the Columbus Day windstorm of 1962, and the impetus it supplied to road-building. It had an "enormous impact on the Applegate," he says. Large areas of timber were flat on ground, posing a serious insect danger. Getting to these areas and salvaging the material required roads.[25]

On the Medford District in the 1960s, says John Ifft, "We were building roads."

> I came here at the beginning of the major development of the last virgin forests in the United States, and my career ended when the timber harvesting ended and the road development ended, significantly. And I absolutely loved what I did, every bit of it. I represent the road construction phase of the BLM in Medford. From Cave Junction to Klamath Falls, I know every road. And I love it. I'd love to get in my truck and drive for two weeks solid and see it all again.

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[24]Ibid., pp. 61, 140.

[25]These remarks and all succeeding reference to John Ifft draw on authors' interview with him on May 22, 1995.

When he came to the BLM, says Ifft, you couldn't get to most BLM forestlands except on foot. There were almost no logging access roads, and in fact the government was denied legal access by private property owners to many blocks of federal forest land. "We dreamed of the day when we could drive to this saddle," he remembers. So they went to work:

> We bought a lot of easements, we surveyed, we drew plats, we negotiated with landowners, we paid landowners, we built fences and cattle guards to suit landowners. Anything that they wanted, we did for them, and we did it in the timber sale, and so we were always involved in some yelling back and forth, and somebody was growing marijuana and they didn't want us in there, you know, there was always some reason why they didn't want the road in behind their house. So we were forever talking to people about getting legal access to government land.

During the 1960s and 1970s, Ifft reports, the Medford District BLM built about two hundred miles of logging access roads every year, adding up to three thousand miles of roads in fifteen years. At the time, he says, this "was more roads than there were in the entire state of Alaska." He guesses that he and his fellow BLM engineers built 95% of all the BLM roads now existing in the Applegate and Illinois drainages. In particular, he remembers the road system they built in the middle 1970s on the ridgetops between the Williams and Thompson Creek drainages, which not only gave access for logging but helped fire crews get access to the snags that greatly increased the danger of widespread forest fires.

Ifft believes he is representative of a genuine BLM dedication to getting the public onto the land. And he believes that getting onto the land is what people most want. When the public protests a new timber sale and the roads that go with it, Ifft thinks, the BLM needs to tell them what's in it for them. "You have 8,000 acres of government land that we all own," he'd tell the public.

> But it's right in your back yard and you can't even get to it! And we're going to build that road and we're going to harvest a sensible amount of timber. But you'll be able to get firewood, you'll be able to pick mushrooms, you'll be able to get out in the forest and see the flowers and go hiking. And you can't do that now!"

For Ifft, "access" carries a semi-religious aura. It seems to function as one of the transcendental values by which he judges that his life has been well spent. He assures us that his enthusiasm for "access" is genuine, not simply a cover for an irrational road-building mania. "I'm from Pennsylvania," he says, where all property is fenced off and posted with "no trespassing" signs. What he loves about southern Oregon is that the public can roam the hills. "I think public recreation, and dispersed recreation, which is called recreational driving, is a major part of the life for the people" in southern Oregon, he says. "In almost any direction you drive from Medford or Klamath Falls or Cave Junction, there is legal government access for the public. Not just physical access—we built the road—but legal access."

This is the work Ifft is most proud of. Even in his spare time, he was creating "access." He and a Cub pack supplied the driving energy to build the Sterling Mine Ditch Trail. By creating "access," Ifft believed he was earning his stripes as a dedicated public servant, and making good the public's rights to ownership and enjoyment of its forest resources.

"Going in All Directions"

In the upper Applegate, of course, the earliest permanent roads into timber country were built by the CCC during the Depression years. Dutch Offenbacher remembers that the CCC built the Ashland Loop Road up Beaver Creek from its confluence with the Applegate and over into the Mt. Ashland country, giving access to the Klamath River basin via Cinnabar Springs. "That was the only road in that country at that time," he says.

> And now there's logging roads taking off of that Beaver Creek Road going in all directions. It's been a progressive thing—it didn't happen overnight.

As it did on BLM lands, road-building on national forest lands gained its greatest momentum during the 1950s and 1960s. The 1954 Siskiyou National Forest timber management plan takes the road-building problem very seriously.

> One of the objectives of management on this forest is to develop a permanent timber access road system which will serve entire working circles. The forest is almost completely lacking in roads suitable for utilization of the timber resources. . . . Much of the timber volume on the Siskiyou is found in isolated patches situated in rough topography. To harvest such stands requires a substantial investment in roads.

The 1954 plan called for a relatively modest 170 miles of roads to be built by timber operators during the next ten years, with another 21 miles built as government access. But it predicted that 825 miles of new roads would be needed beyond the next decade. It estimated the cost of this road system to be $32 million.[26]

The trend continued into the 1960s. The Siskiyou Forest's 1960 through 1964 Action Plan Map for the Illinois Valley Ranger District lays out an ambitious road-building system, for logging purposes, in much of the Siskiyou's up-country area wedged between Rogue Forest and Illinois Valley BLM lands and drained by Sucker Creek's many tributaries (including Grayback Creek) as well as the Number Eight Gulch region of Althouse Creek. A similarly extensive system was envisioned for a large block of Siskiyou Forest land on both sides of the California border and south to Black Butte, along the upper reaches of the East Fork Illinois River.[27]

Bengt Hamner was the timber manager for the Applegate Ranger District from 1967 through 1978. He reports that the trunk roads in the upper Applegate—particularly on Elliott Creek and the Middle Fork and on Yellowjacket—were built in the 1950s. In the 1960s, roads were extended into the upper Middle Fork (above Whiskey Creek and up toward Low Gap), and Maple Dell Road was put through to Elliott Creek. Then came the Donomore Road, opening up the upper Silver Fork country and giving access to the Klamath River side of the divide.

According to Hamner, the "huge clear-cuts" of forty-to-eighty acres that were "the big thing in the '60s," "built the roads" in drainages like Middle Fork, Steve Fork, Sturgis and O'Brien Forks, and Beaver Creek. When he came to the Forest Service in 1967, the Yale Creek Road was being built to access a large clear-cut in the country around Deadman Point. Hamner's mandate was to shrink the size of the clear-cuts. In the steeper country of the upper Applegate, the types of logging equipment available were "kind of dictating how much distance there was between the roads." He remembers building lots of roads, some of them near Low Gap above Steve Fork, in the Right Hand Fork/Swan Valley area, and in stacked contours on the Thompson Creek divide. "I was a

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[26]Siskiyou National Forest, "Timber Management Plan," 1954, p.8.

[27]Siskiyou National Forest, "Illinois Valley Ranger District Action Plan Map, 1960-1964," January 9, 1959.

witness and a participant," he says. "Hate to admit some of that. We didn't know any different on a lot of it."

One thing he's proud of, though, is his decision to keep roads out of Butte Fork Creek, a remote, unspoiled area full of "beautiful trees," including "some champions" among the older Douglas-fir and sugar pine." By not building the road, he helped preserve the area for the statutory protection that came a few years later. "That's how the Red Buttes wilderness area started," he says.

Rogue River National Forest planning documents chart the high priority placed on the development of major road systems during the last forty years. The 1954 management plan cited the "high road cost and low per acre stand value in Applegate Working Circle" as one of the "major problems" it faced in moving its timber. Its immediate mandate was to solve this problem.

> One of the primary objectives of management on the forest is to develop permanent road systems which will adequately serve all portions of each working circle. Sales will be so planned and located that areas not now served by any roads will be opened up as rapidly as possible.... The big need at present is to construct roads into the secondary and branch drainages.... Most of the forest can be developed through requirements in timber sale contracts whereby the betterment and construction of roads is accomplished by operators. In some cases where operators do the work, the sales will have to be as large as 50 million, but in most instances, the size of the sales can be held below 30 million. In the Applegate Working Circle the use of Federal access road funds seems necessary in order to develop access to some drainages where low volumes and high road cost make it impractical for operators to do all the work. Federal access funds in these instances would permit making smaller sales (5-10 MM) in areas where otherwise they would have to be 30 MM or more. . . .

The 1954 plan estimated that the Forest Service would need to build an average of two miles of permanent roads and another two miles of temporary spurs on every section of its "regulated commercial timber land." As of 1952, the Rogue Forest had about 200 miles of "existing satisfactory" roads. Its hope was to construct another 109 miles over the ensuing five years. Ultimately, it would take a thousand miles of road to complete its access system.[28]

By 1961, Rogue Forest documents could report 32 miles of road built in 1957, 68 in 1958, 85 in 1959, and 68 in 1960. Another 80 were planned for 1961. "This is the second season of intensified advance reconnaissance and route verification," it reported. "We have checked about 130 miles of future roads in 1960 and plan to do over 200 miles in 1961."[29]

By the mid-1970s, the Rogue Forest charted 1,575 miles of system roads and about the same mileage in non-system roads. At the time, it was building new roads at the rate of about 65 miles per year, and reconstructing existing roads at the rate of about 115 miles per year. Eighty rock quarries were being utilized. Now it was reported that another 550 miles would be required to complete its road system, which meant its earlier estimates of road requirements had approximately doubled.[30]

Comes the Sawman

"Careful Selection Cutting"

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[28]Rogue River National Forest, "Management Plan," 1954, pp.20-21.

[29]Rogue River National Forest, "Multiple Use Report for 1961," pp. 10, 12.

[30]Rogue River National Forest, *Final Environmental Statement*, "Timber Resource Plan," 1978, p.65.

Logging got off to as slow start on national forest as on BLM land in the Applegate and Illinois Valleys in the twentieth century. A 1915 Crater Forest report made recommendations that "yellow" ponderosa pine (a superior timber tree) and sugar pine be most widely cultivated in the Applegate region, along with Douglas-fir on north slopes and Shasta fir on higher slopes; and it prescribed "careful selection cutting" and "adequate fire protection" to improve forest conditions. But it admitted that "any material alteration in the types will be practically impossible in the next fifty years, since it is improbable that the demand for sawtimber will bring about any large sales in this region in the near future."[31]

This prediction proved true. In 1924, the Crater National Forest instituted a new "Austrian formula" for calculating a sustained timber yield, based on normal annual increments. It estimated that Douglas-fir grew at the rate of 150-350 BF per acre per year, and yellow pine at the rate of 80 BF per acre per year. On the basis of these figures, the annual allowable cut for the entire Crater Forest was set at 154 MMBF per year.[32] But that figure wasn't even approached before the boom years of 1944 and 1945. Rogue Forest records show about 2.5 MMBF sold in 1911, general upward momentum to a high of 59 MMBF in 1917, then generally falling quantities. A few good years in the mid-1920s (between 48 and 64 MMBF) and a relatively spectacular year in 1929 (70 MMBF) were followed by dramatic Depression-year lows culminating in only 347,000 BF sold in 1936. 1938 began a general upward trend (46 million), followed by markedly higher numbers in 1943 (71 MMBF), 1944 (140 MMBF), and 1945 (152 MMBF). The late 'forties saw gradual declines to about 47 MMBF by 1949.[33]

In the Applegate Valley, very little activity occurred before the 1940s. "Most of the timber harvest activities through 1943 occurred on the Klamath Basin side of the Forest," reports one Rogue planning document.[34] Logging was virtually all in pine species, as the 1939 Rogue Forest price structure indicates: ponderosa pine at $2.00-$4.75/thousand; sugar pine at $3.00-$6.00; western white pine at $5.50-$8.00; and Douglas-fir at $.50-1.00.[35] In the Applegate, Dutch Offenbacher remembers a few trucks rolling down Beaver Creek road in the late 'thirties or early 'forties with huge trees on them: "They didn't want nothing but the best," he says.

Even during the 1940s, logging activity was sluggish on national forest lands in the Applegate region. "Activity in the Applegate Working Circle began with several small sales in 1942," but by 1949, only about 19 MMBF had been sold, three-quarters of it pine and the rest mostly Douglas-fir. Between 1950 and 1954, the Applegate area's annual 12 MMBF allowable cut was never achieved. The 1954 plan complained of the "high road cost and low per acre stand value" in the Applegate Valley, as well as the heavy brush infestations on large burned-over acreages, making reforestation nearly impossible. The Applegate area's annual allowable cut was the lowest on the Rogue Forest outside of the Ashland Working Circle, where Ashland watershed restrictions severely limited logging activity.[36]

On the Siskiyou National Forest during the same years, timber managers were telling a similar tale. The first management plan, in 1920, only included the North Coastal Working Circle, since "the remainder of the forest was so inaccessible that no one could foresee logging in it within the next

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[31]Crater Recon, Extensive - Report: Covering the Applegate River and Bear Creek Districts," April 22, 1915, pp. 13-14.

[32]Brown, *Rogue River*, I, p. 225.

[33]Rogue River National Forest, "Management Plan," 1954, p. 8a.

[34]Rogue River National Forest, *Final Environmental Statement*, 1978, p. 69.

[35]*General National Forest Information*, p. 5.

[36]Rogue River National Forest, "Management Plan," 1954, pp. 8, 1-3, and chart following p. 4 ("Forest Control Record for Budget Period 1950-1954").

twenty-five years." [37] Before 1940, Siskiyou Forest timber sales were "small and infrequent." A few small mills drew primarily on sugar pine from private and county timberlands. But during the 1940s, things picked up. The Siskiyou National Forest sold several million board feet of sugar pine in Swede Basin and Douglas-fir/sugar pine on Mungers Creek. In the Illinois Valley, Forest Service sales totaled 16 MMBF between 1940 and 1947.[38]

One of the reasons for the slow start, in the minds of Siskiyou timber managers, was that their timber was "fringe." Much of it had been subjected to fire, and

> as a result the stands occur in broken groups with the heavier volumes usually lying in small canyons separated by brush fields. . . . The scattered stands and light volumes are not conducive to a Forest Service sustained yield unit for any one operator.

Intermingled O&C lands were another problem. But the Siskiyou's fortunes were changing: "This [1947] is the first year that the allowable cut for national forest lands will be approached. Five companies are now at least partially dependent upon Forest Service sales." The 1947 plan outlined a sale strategy based on "selective marking of approximately 30% of the stand," cat-logged, with small clear-cuts for silvicultural reasons. It pegged the allowable cut for the Grants Pass Working Circle, the bulk of which lay in our study area, at 20 MMBF.[39]

By the time of the 1954 timber management plan, Siskiyou Forest managers had changed their strategy. Now, selection cutting was increasingly out of favor, due to "an exceedingly strong tendency for brush to take over any disturbed area for a considerable period of years." Brush species like tanoak, rhododendron and evergreen huckleberry were making for reforestation nightmares. "Little or no reproduction from the desirable species becomes established under the reserve stand and the more tolerant brush species invade the area with extreme rapidity and to a great density." The new plan called for clearcutting in "small staggered settings," broadcast burning, and re-planting. This, in order to

> eliminate the competition fatal to planted stock, the staggered small settings provide a reserve seed source in case of failure of the plantation, the burn and the small staggered settings hold the fire hazard to a minimum, and the immediate planting allows the desirable species planted to become established before the area is taken over by the brushy species.

The 1954 plan envisioned encouraging Douglas-fir re-growth on north and west, and moderately moist, slopes and ponderosa pine on the dry south and east slopes. It put little emphasis on sugar pine, since it was susceptible to blister rust and its "soft, clear, fine grained wood that is so highly prized is developed mainly at great age and a long rotation would be indicated." And it considered regeneration of Port Orford cedar unimportant, due to limited or specialty-oriented demand, high logging costs, and its "objectionable" odor.[40]

The 1954 plan on the Rogue River National Forest was similarly upbeat about growing demand for public timber. It predicted that the Applegate region would soon sell enough timber to meet its annual allowable cut. "At present all working circles have a demand of equal or above the allowable annual cut," it reported. Clearly, the push was on to maximize timber resource values. The plan promised to "promote community stabilization" by harvesting "the fullest possible amount of allowable cut" and pushing forward a program of "rapid access road development of areas not now adequately covered."[41]

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[37]Siskiyou National Forest, "Timber Management Plan," 1954, p. 5.

[38]Siskiyou National Forest, "Timber Disposal Program," 1947, Grants Pass Working Circle, p 1.

[39]Ibid., pp. 1-3.

[40]Siskiyou National Forest, "Timber Management Plan," 1954, pp. 12-14.

[41]Rogue River National Forest, "Management Plan," 1954, p. 8.

By the late 1970s, the Rogue Forest was able to report some success in reaching its goal. It compared favorably its highest annual cut of 270 MMBF in 1973 with its modest 1938 to 1943 average cuts 37 MMBF. It was pleased to show that its average annual cut for the years 1963 to 1976 was over 196 MMBF, a five-fold increase. A slowdown in the building trades had lowered its 1975 cut to only 111 MMBF, but it assumed such fluctuations were only temporary.[42]

In the Applegate Ranger District itself, LaLande reports that the earliest large sale was bought in 1942 by the Timber Products Company of Medford—"three-and-a-half sections of Forest Service timber on McDonald Creek and the upper Little Applegate River." Over the next three years,

> the same company cut government stumpage on the west slope of Steamboat Mountain and along upper Beaver Creek. . . . Following 1950 virtually every drainage system within the Unit [Rogue River National Forest lands in the Upper Applegate] witnessed a certain amount of road construction and timber harvest activity.

In 1950, O'Brien Creek was cut in the Upper Applegate, followed by several large volume sales in Joe Creek (1954) and then, as Hamner has confirmed, on Sturgis Fork, Steve Fork, and Middle Fork. By 1970, LaLande tells us, most of the Rogue Forest's Applegate country "had come under some form of timber management."[43]

"Ridge upon Ridge"

In 1939, the Forest Service issued a pamphlet describing the Rogue River National Forest itself and its activities. About logging, it said this: "Ripe, standing timber on the National Forests is offered for sale in regulated amounts to improve growing conditions and maintain local lumber industries."[44] These were the days before clear-cutting, when the forest "practiced selective marking of all stands and species," as it had from the beginning of logging activity on the national forests. But in 1954, the Rogue Forest's management plan revealed that, after 1948, "and to a greater degree in 1950," it had moved to "staggered clear cutting in relatively small patches of 10 to 20 acres in the Douglas-fir types."[45] In the following years, both clearcutting's permitted acreages and species gradually expanded, until, by the late 1960s, clearcutting became standard practice on both Forest Service and BLM lands in the study area.

By the time it issued its Timber Resource Plan in the late 1970s, the Rogue River National Forest managers felt constrained to admit the obvious:

> Ridge upon ridge of uniform forests—this classic image of the forests of the Cascades and Siskiyous is changing as timber harvesting patterns become more evident.[46]

In the amazingly brief period of about twenty years, the landscape of southern Oregon experienced dramatic visual changes. Clear-cutting, which Hamner calls "the big thing" in the 1960s, comprised the single largest source of major environmental change since the Second World War.

When Hamner came to work as the Applegate District timber manager in the late '60s, the era of the most rampant clearcutting was slowly winding down. He reports that before his time, one huge clearcut in the Applegate District (e.g., the Middle Fork, Whiskey Creek/Sutton Gulch, Squaw Mountain or Yale Creek sales) could be counted on to supply almost enough timber for a whole

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[42]Rogue River National Forest, *Final Environmental Statement*, 1978, p. 70.

[43]LaLande, *Prehistory and History*, pp. 96, 42.

[44]1939 RRNF pamphlet, p.5.

[45]Rogue River National Forest, "Management Plan," 1954, p. 20.

[46]Rogue River National Forest, *Final Environmental Statement*, 1978, p. 58.

year's allowable cut—as much as perhaps 20 MMBF per sale. "They put up almost a whole allowable cut," he says. That, according to Hamner, was clearcutting's huge advantage: it was "convenient." The albatross around the neck of the Forest Service, he says, was the allowable cut, which was not so much allowable as required. "Volume" counted for a great deal in the managerial ranks of the Forest Service. You could get volume fastest by clearcutting.

Hamner continued to include clearcutting in his silvicultural repertoire, but drastically downscaled the size of the cutting units. During his time, instead of one large sale, the Applegate Ranger District would put up perhaps ten smaller sales per year. He admitted that there were not many areas left in the Applegate District for large sales when he arrived. But even if they had been available, he says: "I'm an advocate of small sales." Large clearcuts seem to him now to be generally problematic. They take too much land out of production at one time and pose serious difficulties for successful regeneration in the hot, dry climate of southwestern Oregon.[47]

Hamner's years on the Applegate Ranger District, the 1970s, coincided with a more general turn in the Forest Service toward alternative silvicultural methods, primarily shelterwood harvests. In its 1978 Timber Resource Plan, the Rogue River National Forest claimed that throughout the decade it had been leaning toward the shelterwood silvicultural system. "Shelterwood units create less initial visual impact than clear cuts," it said, and offer greater chances for reforestation in the "arid summers of southwest Oregon." It described the shelterwood process:

> A shelterwood harvest removes the mature trees in two or more entries over an extended period of time. It is meant to insure adequate shade during high summer temperatures so that a stand of reproduction can be successfully established and/or to provide shelter in frost pockets.

The final entry to remove the remaining large trees on a shelterwood harvest unit would not ordinarily occur until young trees were at least two or three feet high. Early Rogue Forest shelterwood units tended to be large, one of them covering 700 acres, but by the late 1970s, shelterwood units were rarely reaching 100 acres.[48]

Hamner describes the Maple Dell area sales as typical shelterwoods carried out during his years. He says Maple Dell was cut three or four times between the late 1960s and the late 1980s. Sales on Yale Creek, Yellowjacket, and Donomore offer similar examples. He compared his shelterwood cut on Donomore with the huge clearcuts there during the previous decade. "One unit, they tried all kinds of things to get trees to grow. And I think if it had been selectively logged, they wouldn't have had that trouble." Even where the Forest Service constructed terraces in the Silver Fork drainage, regeneration proceeded only very slowly. By contrast, Donomore shelterwoods were soon successfully regenerated.

"The Gang that Developed the Virgin Forests"

The BLM's John Ifft remembers the clearcutting era. He says it arrived with the young foresters from northern Oregon. The first clearcuts he remembers were just outside the study area on the Talent side of Anderson Butte. Eric Allen, the local newspaper editor, was outraged and raised quite a furor about it, but the BLM went ahead. Ifft recalls a clear-cut of 9 MMBF on Grub Gulch during his time. Now, Ifft says, Grub Gulch has permanent roads with good access, it's regenerated, and it supports a healthy wildlife population.

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[47]Commenting on a switch from 1970s-early'80s shelterwood cuts back to clearcuts, Hamner commented: "Somewhere up in the 80s, the trend [re]turned to clearcut, which I hated to see."

[48]Rogue River National Forest, *Final Environmental Statement*, "Timber Resource Plan," 1978, pp. 58, 62.

Ifft thinks that, generally speaking, clearcutting was the "logical" way to do things. He seems proud of the fact that the BLM's clearcuts were, in his opinion, on average smaller than the Forest Service's. He remembers successful clearcuts on the slopes of Cinnabar, looking down Boaz Gulch, where the BLM put its units in across, not down, the hill, to minimize the scenic impact. On Little Grayback, the BLM put in small patches of clear cuts "way up high" in the late 1970s.

On the other hand, Ifft admits that his agency "made some clearcuts in areas that should never have been clearcut. . . . I don't think we learned well enough from our predecessors." The BLM's most serious errors in judgment, he thinks, were in the Dead Indian plateau country, on the east side of the Rogue Valley. On Conde Creek, for example, repeated replantings failed to generate a young forest. "Gophers are managing the forest there," according to Ifft. When the silviculturalist planned a second Conde Creek clear-cut in the mid-1980s, Ifft says, "I should have yelled like hell." He didn't, though, because "I got to surface my road with crushed rock, which I knew was a major improvement. Timber pays for that. We had to harvest timber somewhere. . . ." Conde Creek had a serious root rot problem, as well, and Ifft respected the silviculturalist who prescribed clear-cutting and replanting in incense cedar and pine as the only method to eradicate it. "So let's say I had to pull in my horns. . . because they're trying something new and I think they know what they're doing."

Ifft says:

> I think we made some mistakes in the Applegate, so did the Forest Service, where we perhaps clear-cut on thin soils. . . . There are places in the Applegate with very sensitive soils that shouldn't have been clear cut, they could have been harvested by individual tree selection, which is more difficult, more expensive, more time consuming, clearly not very profitable I guess.

He points to two problem areas in particular—Anderson Butte and Woodrat Mountain.

> I know of some on Anderson Butte. And one unit that we harvested that never should have been cut was on Woodrat Mountain looking at the town of Ruch which has come back to canyon live oak. It had old growth timber on it but there was a loose gravel on the surface. A pocket of Doug fir. It's coming back, but very slow. You manage land on poor soils very carefully and over a long period of time and you don't clear cut. We clear cut. Now that's one unit in five units. I'm complaining about one mistake in one timber sale. . . . I can point to several others where we all admit we made a mistake, but we can point to ten where it's growing and we're proud of it. . . .

Ifft says that the BLM cut about the same amount of timber in the Applegate drainage as in the Illinois, where most of its holdings were in the Deer Creek and Holland areas.

> We scattered the harvesting all over the half a million acres that we managed. Purposefully. We didn't want a timber sale in the same township if we could avoid it. So that there was an opportunity for harvesting by small loggers and small sawmills all over our area and to reduce the impact on the roads and watershed.

Generally, the agency tried to give an area that had been logged five or ten years to heal before it came back for another sale.

> We let the area heal itself. The roads and units were healed and regrowing in brush and planted trees before we ever entered it again. And the only time we ever violated that was, we went in and got a cream sale, where the roads were already there, and you could get a quick sale to meet your volume deadline. And that didn't happen very often.

All in all, Ifft is pleased with a lifetime of work in southern Oregon's public forests. "I'll include myself in the gang that helped to develop the virgin forests of southern Oregon," he says. "I'm pretty proud of a lot of things we did."

How do we give a sense of the scale of human managerial entry on the land during the third quarter of the twentieth century?

From the late 1950s through 1970, the BLM kept its records in large registers (almost the size of a cardtable top) that it called "atlases." Each Master Unit had its own atlas. The atlas recorded management activity of various sorts: timber sales, reforestation, fires, grazing, mining claims. Although the records do not seem to be uniform or complete—some tables, for example, leave certain categories unaccountably empty—they offer the best available information for determining the scale of management activity on BLM lands during the period.

During the 1960s, the BLM lands in our study area fell under two different Master Units: most of the Applegate drainage was in the Jackson Master Unit; the Illinois drainage and the Williams Valley were in the Josephine Master Unit. Choosing several sections of BLM land in each of these Master Units, at random, and consulting the atlases to see what sort of management entries were recorded for each of them, we can follow the progress of what was arguably the first complete decade of intensive forestry in the study area.

In the Applegate area, we chose four sections in the Thompson Creek drainage. One of them is a wholly-owned BLM section near the mouth of Thompson Creek: T38S/R4W, Section 27. Most of the recorded activity on this section has to do with quartz or lode mining claims filed or relinquished: John Bailey #2, Pops, Princess, Afterthought and Lucky Strike are the mines named. The atlas also notes that the southwest corner of the section was clearcut sometime prior to 1959; that four acres were surveyed for reforestation in 1961 and found not feasible; that the Misty Sweeper sale, in 1962, cut 2,213 acres primarily south of the section but catching the southwest corner of the section; and that Vern Fowler salvaged 25,000 BF in December, 1970.[49]

The three other sections we chose are closer to the headwaters of the Thompson Creek drainage, along Ninemile Creek on the north side of Humpy Mountain where BLM land abuts Rogue River National Forest land. All three are in T39S/R4W, Sections 30 (the BLM owns all but the northwest quarter), 31 and 32 (wholly BLM-owned).

In Section 30, the early 1960s saw substantial logging activity. Mountain Fir bought a 133-acre sale (about half partial, half clear-cut, total 2.6 MMBF) in 1961; a 130-acre sale (partial cut except 17 acres of salvage, total 1.8 MMBF) in 1963; and a 7 MBF salvage sale in 1964. Also recorded are 51 acres seeded with Douglas-fir in 1963.[50]

The atlas records only one item for section 31: a one-acre lightning-caused fire, called the Humpy Peak Fire, on August 19, 1958.[51]

For section 32, the atlas records a 59-acre clear-cut (3.6 MMBF) by Mountain Fir in December 1959; 59 acres seeded with Douglas-fir in 1961; and then heavy Mountain Fir activity in 1968 (225-acres partial cut, 1.6 MMBF), and 1969 (two smaller sales, prescriptions not given, totaling 64 MBF). Finally, in 1970, John Kuitert bought 4 MBF of unspecified timber in this section.

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[49]A quick survey of timber sale records in other formats for the ensuing two decades shows the 527-acre Hinkley Gulch sale in 1972, the 2,134-acre Misty sale (647 acres cable logged, 254 acres tractor logged) in 1976, and the 1,640-acre Misty Hinkle sale (96 clear-cut acres cable logged, 113 clear-cut acres tractor logged, and 107 acres of overstory removal) in 1986 all including portions of this section within their boundaries.

[50]Later records show the 801-acres Thompson Creek sale in 1974 and the 519-acre Lower Nine Mile sale in 1976 both including portions of this section.

[51]Later records show clear-cuts and overstory removal cuts planned for 1974 and 1976, but it is unclear whether they sold until the sale was reduced in size in 1986.

In the Josephine Master Unit, we concentrated our choices in the nine square-mile block wholly managed by the BLM around Mungers Butte (T38S/R6W, Sections 13, 14, 15, 22, 23, 24, 25, 26, 27); and on a wholly-owned BLM section at the headwaters of the Thompson Creek tributary of Deer Creek, draining into the Illinois River (T39S/R7W, Section 3). Both of these areas give the impression of heavier logging activity during the 1960s than the Thompson Creek drainage in the Applegate. The Josephine Master Unit atlas also gives the impression of more thorough record-keeping than the Jackson Master Unit atlas.

In the Mungers Butte area (the block of Sections 13, 14, 15, 22, 23, 24, 25, 26, 27), two earlier sales are recorded in the atlas: a 2.7 MMBF sale of Douglas-fir in section 15 to Spalding and Sons in 1946, and a 150,000 BF sale of Douglas-fir in section 13 to Bate Lumber Company in 1956. In 1959, logging activity begins in earnest. Two 1959 sales to Spalding and Sons in section 14 total about 4.4 MMBF. In 1961, Higginbotham bought 120,000 BF on 71 acres in section 13. From 1962 through 1964, Spalding and Sons bought ten separate sales scattered in sections 13, 14, 15, 22, 23, 24 totaling about 15.3 MMBF. Between 1965 and 1971, eight different lumber companies bought twenty different sales that included portions of our nine chosen sections. The smallest was 3,000 BF, the largest 7.4 MMBF. Five of them were above 2.5 MMBF.

In the Thompson Creek drainage (off Deer Creek), Section 3 shows a similarly active logging history during the 1960s. In 1961 and 1962, S,H&W Logging bought three sales on 235 acres (three-quarters of it clear-cut) for a total volume of 7.3 MMBF. From late 1962 through early 1970, five different firms bought eight sales. Acreages are not recorded, except on the largest, a 157-acre clear-cut by Rough and Ready in 1963, total volume 6.1 MMBF. Most of the other sales were for less than 21,000 BF.

These samples, of course, represent only about a decade (and not the most active decade) of BLM logging activity. If we collated the vast amount of raw data in BLM files representing the 1970s and 1980s, we could only heighten the impression of an ecosystem examined and handled, measured and weighed, sliced and diced under terms dictated by the late twentieth century's dedication to efficient commodification and extraction. With regard to managerial activity, John Ifft summarizes the period for us:

> Very few sections of government land have not been entered.

The City Moves to the Country

And all this slicing and dicing is taking place in a goldfish bowl. New constituencies are driving into and moving into the countryside. Often, their interests diverge from those represented by the older ranching, mining and logging communities, whose interests the federal agencies had learned to appreciate and, as much as possible, accommodate. These new constituencies, with some justice, think of the federal lands as their own, and begin to ask that their interests be represented on those lands. New rural residents, moving to the countryside for a slower pace of life, begin to experience the prime examples of that way of life, the ranching and logging communities, as annoying nuisances or barriers to progress. The ranching and logging communities, pressed by rising taxes and a difficult economy, finding themselves increasingly outnumbered, sell some of their land to the newcomers, contributing to the disappearance of their way of life.

When you can't afford to ranch anymore, because your neighborhood isn't made up of ranches any longer and things aren't organized to accommodate cattle and cattle drives, and it just doesn't earn you a living, what do you do with the ranch? Dutch Offenbacher doesn't see that people have much choice.

> So what do you do with the land? Well, I don't propose putting a house on that field, but I might propose to break that up in twenty-acre pieces or thirty-acre pieces and make a little mini-ranch out of it for a guy, if he's retired, he'd have a nice place to retire. I don't know

> what else you do with it. As long as we have enough people coming up here with enough money to buy these ranches and keep them as a ranch, they don't worry about having to make a living, they can hire two or three guys to shovel the ditch and do the heavy work, and they can get on their horse and ride around the countryside.

In effect, you find yourself contributing to the demise of the very life you loved, the ranching life. Once people started flocking to the Applegate and Illinois Valleys, the people who were already there soon felt trapped into making the kinds of choices that would mean even more people in the future.

The biggest change Dutch has seen in his lifetime is the influx of population since the 1950s. He attended the Applegate Elementary School when there were only thirty-five children in the whole school. Now, he says, around 150 attend. People everywhere, houses everywhere.

> The only houses on the Applegate that I can remember when I was a kid, 99% of them I'll say, were houses on operating ranches. Now. . . well, I'm setting here, I'm not on an operating ranch. I got a lawn that I got to mow. It costs me money, but it certainly don't make me any. Makes me feel good to look at it. Neighbor right here on the corner. Three houses on that hill, up this way. The little old white house as you go up the road this way, first house on your left, that was the farm house. Now that guy that owns that place is building a house up here, he's got two houses on the hill. Houses everyplace. They're people that either work in town or retired. . . . People like the rural living. That's the way it's going to be. That's the trend, and I don't see it turning around. . . . There's nothing we can do about that.

Population statistics give an impression of the revolution that has occurred in the countryside since the Second World War.[52] The total population of the what the Census Bureau called the Applegate District (which excluded the Josephine County portion, particularly the Williams Valley) in 1930 was 425. By 1940, it had risen to 504, and by 1950 to 547. The decade of the 1950s saw the first big jump: the population of the Applegate Division was put at 1,294 in 1960. By 1970, it had risen to 1,711. Williams shows more impressive growth: from 472 in 1930 to 727 by 1950, to 1,028 by 1960 and 1,314 by 1970.

The 1970s was a decade of rapid population growth in the Applegate Valley. At the beginning of the decade, the entire valley (both Jackson and Josephine County divisions) showed a total population of 3,025. Before 1980, this figure had mushroomed to approximately 9,000.[53] What LaLande says of the Little Applegate is true of the entire Applegate and Illinois Valleys: currently, the population

> may actually be the largest, densest, and most widespread in its history. In addition to full-time residents, the number of regular visitors (delivery people, firewood cutters, hunters and other recreationists, government employees) within the watershed at any one time is a significant factor.[54]

LaLande also notes that in recent years very few of the Little Applegate Valley residents have earned their living from the land. Census figures agrees: "Many residents commute to employment

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[52]These estimates may be somewhat imprecise; the Census Bureau changes unit boundaries every now and then.

[53]With one exception, these figures are drawn from a variety of census reports listed under "Demographic Sources" in the bibliography, which gives identifying number for each after the code "Demo." These paragraphs draw on the following: Demo #10, p. 638; Demo #11, p. 1,018; Demo #12, pp. 37-17; Demo #13, pp. 39-49; and Demo #14. The exception, also supplying figures for this paragraph: *Rogue River Basin Report* (Salem, OR: State Water Resources Department, 1985), p. 179.

[54]Lalande, *Little Applegate*, p. 16.

outside the Applegate Basin."[55] Others are retired, or subsist on welfare payments, or operate small businesses out of their homes, or have independent wealth. Generalizations are difficult. A few of these newcomer groups warrant their own brief narratives.

Tourists

In the 1870s, a Williams Valley resident was out hunting and stumbled onto the Oregon Caves. By 1885, there was enough interest in the caves to improve the trail and install primitive camping facilities. Although the Oregon Caves National Monument was declared in 1909, you still could only get there by trail from Williams or Holland. But in 1922, the State Highway Division and the Forest Service cooperated to build the eight-mile auto road from Holland. The Grants Pass Chamber of Commerce was enthusiastic, thinking that the road "heralded a golden age of tourism for the Illinois Valley and Grants Pass."[56]

The mid-1920s saw a brief campaign to make the Caves accessible from the Williams area, on the east side of the Applegate/Illinois divide, via a road over Grayback. In 1925, the Chambers of Commerce of Jacksonville and Medford, as well as representatives of Jacksonville, Applegate and the two counties, proposed such a road in order to shorten the distance from Medford to the Caves by over forty miles. They wanted the Siskiyou National Forest to put up the $213,000 for its portion of the road. Siskiyou Forest managers were distinctly unenthusiastic about any roads "primarily for tourist purposes."[57]

Over the next few years, the issue was debated in a flood of correspondence, now on file at the Siskiyou National Forest. The Grants Pass Chamber of Commerce emerged as a determined opponent, since it would lose much of the Medford traffic over existing highways. The Medford Chamber of Commerce and residents of the Williams Valley emerged as the road's champions, collecting letters of endorsement from public and private spokespersons across southern Oregon.

> Frankly, our principal immediate purpose in urging the construction of this highway is to give the travelers and tourists coming up the coast from the south, an opportunity to reach the Oregon Caves, Crater Lake, Diamond Lake, Lake of the Woods, and the lake region of the Klamath basin, by a more direct and scenic route than they now have.

They stooped to pleading:

> All of the counties north of Jackson have either completed or under construction, highways leading direct from the Pacific highway to the Pacific coast. Jackson county is equally entitled to a direct outlet, especially in view of the fact that this county built the first section of the Pacific highway at its own expense and has never been reimbursed for this outlay and never will be.

This message was sent in late 1929, a year that ended poorly for the American economy, the first in an unbroken series of bad years. Tourism seemed a likely fix for what many may have considered passing economic difficulties.[58]

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[55]*Rogue River Basin Report*, 1985, p. 179.

[56]Francis, *History*, pp. 61, 43.

[57]Memorandum by Assistant District Forester Kavanaugh, September 30, 1925, in Siskiyou National Forest folder SK-000-060, 1925-29, Files and Trails of Williams Creek, OR.

[58]Petition Addressed to the Oregon State Highway Commission, the National Forest Service, and the Federal Bureau of Public Roads, November 21, 1929, in Siskiyou National Forest folder SK-000-060, 1925-29, Files and Trails of Williams Creek, OR.

At times during these years, certain of the Siskiyou National Forest managers seem to have warmed to the idea, offering arguments to the effect that the road "would facilitate forest administration and make the protection and utilization of the national forest in this region easier and more effective."[59] In the long run, however, forest managers could not justify the costs of such a road. By the early 1930s, even the Medford Chamber of Commerce seems to have run out of steam, and the road project was shelved.

In the meantime, however, the Redwood Highway was completed from Crescent City to Grants Pass, and in the prosperous years just prior to 1929, auto touring began to catch on. Elwood Hussey, who had homesteaded eighty acres right where the Redwood Highway and the Caves Highway met, proclaimed himself a city father. He laid out his municipality, and called it Caves City. Soon re-named Cave City, it grew slowly during the 1930s. It sported a hotel and medical office, all painted red, white, and blue. In 1934, a fire destroyed the west side of town. Cave City rebuilt. In 1937, to the dismay of the handful of residents, it was granted a post office under the name Cave Junction. Old-timers insisted on calling it Caves City.[60]

The Depression certainly delayed the growth of a tourist-oriented culture in the Illinois Valley. Ruth Pfefferle says that in 1940, Cave Junction was still heavily wooded, and the Caves Highway was a dirt road. But "about 1946 the town began to grow, and Ken and Beulah Hamilton built a motor court across the highway from the intersection of Redwood Highway and Caves Avenue." In 1946, Cave Junction was incorporated, accompanied by continuing disagreement over its name. The same year, it burned down a second time, and was rebuilt.

But the logic of the highway would not be defeated. What had been taken away from Waldo had been given back to Cave Junction. Ruth Pfefferle:

> Although many residents of the Illinois Valley continued to identify with their older communities of Selma, Kerby, Takilma, and so on, Cave Junction gradually became the trading center for the Valley, as well as the tourist center for those visiting the Caves and travelling by way of the Redwood Highway.[61]

By 1984, those tourists added up. The Oregon Caves were attracting about 150,000 visitors every year.[62] On the lower Illinois River, rafting enthusiasts, almost non-existent before 1970, were numbering 2,400 per year by 1982, and Siskiyou National Forest lands in general estimated hosting over 31,000 recreation visitor days that year.[63]

Population figures show Cave Junction's trajectory. Until the 1950 census, Cave Junction doesn't appear. Althouse does, though, as the symbolic center of the upper Illinois Valley: its population of 336 in 1930 is swelled by Depression-era mining to 473 by 1940, then begins its decline to 403 by 1950. That year, Cave Junction shows up with 283 people. In 1970, 415 people lived in Cave Junction proper, and by 1980 its population reached 1,023. The entire upper Illinois region shows a population of 2,659 in 1960, rising modestly to 2,866 by 1970. The big jump came in the 1970s,

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[59]Correspondence of District Forester C. M. Granger to Forest Supervisor, Grants Pass, Oregon, February 5, 1929, in Siskiyou National Forest folder SK-000-060, 1925-29, Files and Trails of Williams Creek, OR.

[60]Francis, p. 43.

[61]*Ibid.*, pp. 44-45.

[62]*Rogue River Basin Report*, 1985, p. 27.

[63]*Ibid.*, p. 268.

when the area's population rose to 6,782. New housing patterns were primarily rural, represented by lot sizes between one and ten acres.[64]

Many of the Illinois Valley's new residents since the 1950s "came to retire, change lifestyles, seek job opportunities, and escape crowded urban areas. Many have been attracted to the area by the moderate climate and numerous recreational opportunities."[65] Some represented the service industry, catering to the tourists who travel through or who visit the Oregon Caves or the Kalmiopsis Wilderness. Many were government employees. Some were enterprising vintners, and others found work in the shrunken logging industry.

Many of them were people the "locals" called "hippies."

Hippies

Hamner, the Applegate Ranger District's timber manager from 1967 to 1978, talks about the 86 cabins (he counted them) that were sprinkled around the upper Applegate drainage during the 1970s. Most of them were in the Elliott Creek and Middle Fork Applegate drainages, but quite a few were scattered elsewhere: up Palmer Creek, on the hillsides at Steamboat. In the late 1960s and early 1970s, folks moved into them and set up housekeeping—alone, in pairs, in families.

At the same time, the Forest Service was trying to weed out people living in the national forest without permits. Under a 1955 mining law, occupants were given a generous twenty years in which to regain their investments in improvements to these cabins before they had to leave. According to Hamner, it took all of those twenty years, and more, to finally clear the cabins of unpermitted occupants. A few refused to leave before they were forced to by the courts. By the early 1990s, however, the cabin era was past.

Hamner doesn't think the hippies left much of a mark on the land. They lived simply, grew their crops, made few demands on the land. John Ifft has a different point of view. He had dealings with hippies in the Takilma area, which rivaled Williams as the study area's largest counter-culture community. He negotiated with them for road access to BLM timber sales, and often had to try to restrict their unpermitted activities on BLM land. Ifft says:

> We didn't like them building outhouses over the Illinois River and shitting in the creek. And there's huge piles of garbage they made on government land. We took offense to that.

One of the doctors who staffed the Takilma People's Clinic in the late 1980s described the Illinois Valley hippie scene this way:

> Takilma, a small community of largely counter-culture residents, was at that time [1973] a rapidly growing town full of excitement and social change. Many young people were flocking from the cities seeking a new life-style and searching for a place where they could practice self-sufficiency.[66]

For many of the older residents of the upper Illinois Valley, the "excitement" was of a distinctly different sort.

> Descendants of pioneer families maintained their homes in the [Illinois] Valley, and everyone knew each other. But the late sixties and early seventies brought change. Members of the counter culture, often termed 'hippies,' saw the sparsely-populated Illinois

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[64]Demo #10, p. 638; Demo #11, p. 1,018; Demo #12, pp. 37-17; Demo #13, pp. 39-49; Demo #14, n.p.; Demo #16, n.p.; and *Rogue River Basin Report*, 1985, pp. 179, 242.

[65]*Rogue River Basin Report*, p. 242.

[66]Francis, *History*, p. 32.

> Valley as a place to get 'back to the land,' a place where they could learn to be self-sufficient and develop new life-styles. Some of the Valley residents welcomed them, but most did not. Some residents threatened to boycott businesses that catered to hippies, and some Cave Jct businesses posted signs proclaiming, 'We do not solicit hippie patronage.' The newcomers were centered mostly around Takilma, in a fairly remote part of the Illinois Valley. Despite the prejudice against them, which many long-time residents attributed to their supposed unorthodox morality and use of drugs, the hippies had come to stay, and many of them slowly earned the respect of local residents. From their uniquely-designed homes to their fierce independence, their life-styles have slowly influenced the tenor of the Illinois Valley.[67]

No doubt, the counter-culture immigrants contributed to making the 1970s "a new 'boom' decade for Cave Junction." As they were joined by other, more "respectable" and also more affluent newcomers, taking advantage of inexpensive land, the city of Cave Junction blossomed. A new Junction Inn was built, joined by a new High School, City Hall, Federal Building, swimming pool. "Current talk," writes the historian in 1988, "is of economic development, to provide jobs, and of updating municipal services to bring them up to the levels demanded by the increase in population."[68]

Environmentalists

If Ifft is right, the counter-culture population of Takilma, for all their "back-to-the-land" ethic, was not particularly sensitive toward environmental issues. For instance, Ifft does not remember the Takilma people protesting BLM timber sales in the 1970s. He is aware, however, of at least one significant counter-example. Their names were Art and Paula Downing.

The Downings moved to southern Oregon in the 1970s to create a new world for themselves and their friends. They came as part of a migration of the "Friends of Perfection" from San Francisco to Roundtop Mountain, which sits astride the headwaters of Murphy and Deer Creeks, respectively feeding the Applegate and Illinois watersheds. They took their water from streams flowing off Roundtop. When the BLM decided to log Roundtop, the Downings put up a fuss. They didn't want their stream to dirty up or, worse yet, to dry up.[69]

The Downings helped organize a group called "Headwaters," and fought the BLM on the Roundtop sale. Grudgingly, the BLM reduced its sale acreage from 1700 to 250. The Downings kept fighting.

The sale still included the streams from which they took their water. They sued, shutting down BLM timber sales for months. They demanded that the BLM do an Environmental Impact Statement, not only on the Roundtop Mountain sale but on all its proposed timber harvests in Josephine, Jackson, and Klamath counties. They accused the BLM of over-cutting, and of ignoring the re-forestation failures on its Medford District lands.

In 1976, the BLM's Medford District Manager, Don Schofield, informed the state BLM office that the allowable cut needed to be reduced by a third. Schofield had been Medford District Manager since 1962, and had for some time been resisting the state director's goal of liquidating the BLM's old-growth forests at a relatively rapid rate—something the Downings had recognized as well. His

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[67] *Ibid.*, p. 45.

[68] *Ibid.*, p. 45.

[69] Material for this and the next five paragraphs drawn from Randal O'Toole, "Headwaters: A Short History of a Backwoods Battle with a Rapacious Federal Agency," *The CoEvolution Quarterly* (Winter, 1976-7), pp. 54-59.

latest inventories were suggesting that the BLM was not growing timber as fast as it was cutting it. This, Schofield thought, compromised the agency's commitment to "sustained yield."

The Medford *Mail Tribune* published Schofield's memo to little ado. Not the response, however, to the seemingly unrelated announcement that the Headwaters appeal would immediately stop further BLM timber sales. Influential community voices howled. The state director, Murl Storms, informed Schofield he was being transferred to a staff position in the state office. Schofield, understanding this as a demotion—and perhaps feeling scapegoated—retired at the age of fifty-four.

Forest economist Randall O'Toole, one of Art and Paula's expert witnesses in court, asked Paul Macomber, who was covering the issue for the Grants Pass newspaper, how the Downings were being received in Josephine County. The Grants Pass paper had published directions to the Downings' house, "just in case any irate loggers want to beat Art Downing up." Macomber answered:

Art's different. He can speak the language of a mill owner and make him understand where Art's coming from. They may disagree, but they won't be enemies.

Eventually, the Downings lost their bid to keep BLM timber harvesting shut down until the agency could write an Environmental Impact Statement on Josephine County. They did, however, take an early step in regional, grass-roots environmental organizing, and bring issues surrounding the management of public forests to greater public awareness.

Even among the old-timers, one finds a bit of the environmental spirit surfacing from time to time. Ethel West wants it known that she's "not an environmentalist altogether—only to a degree." But when she drives in the Applegate and looks at the mountainsides she has called home for most of the twentieth century, she sees the clear-cuts as "scars," and she's sorry it's come to that.[70]

> I believe in taking care of the environment, and I believe in putting back if possible what you take off. The logging process now is done with such big equipment, and they do it so fast because it costs them they've got to do it fast to make any money. And I guess the demand for the lumber and the building material also has caused it. . . . It's caused a lot of timber cutting that should've been more selective, I think, than to go in and just cut it down like a hayfield.

Ethel can't say when it happened. It was so gradual. But now, it's obvious. "Now, you look at the hills and here's this big old bare spot."

Fred West thinks the damage is technologically driven.

> They used to go out and pick out the logs that they wanted, and use the oxen to drag the logs in. They made one narrow trail, maybe knocked down a few little trees. Then they got to using the carts with the teams, and they done a little more damage. Then it come to the parts where they was using cats, bulldozers, and each time they destroyed a few more little trees and underbrush. Then they wound up by going in and clear-cutting. Now they're picking it out with helicopters.

Changing Patterns of Land Management

Under the pressures of new residents, new economic realities and new federal laws reflecting post-Earth Day (1970) sensibilities among the American people at large, the management of the federal lands continued to evolve, as it had since the earliest days of the Forest Reserve system.

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[70]These remarks and all succeeding reference to Ethel and Fred West draw on authors' interviews with them on May 22, 1995.

Grazing Takes a Back Seat

With logging driving the engines of the federal land managers in the second half of the twentieth century, grazing quickly lost the priority status it had held up to the Second World War. At the same time, as we have seen, the centrality of grazing in the economy of the Applegate and Illinois Valleys was challenged by the population influx and changing residential patterns. But grazing persisted on public lands, in some instances more carefully and effectively regulated than it had been in past years.

On BLM land, grazing got its first serious regulatory structure when the Taylor Grazing Act was passed in 1937. This law was the end result of decades of wrangling between disgruntled ranchers, frustrated federal land managers and concerned conservation-minded citizens who believed the public lands were being ruined by over-grazing. The Act's purpose was "to stop injury to the public grazing lands [excluding Alaska] by preventing overgrazing and soil deterioration; to provide for their orderly use, improvement, and development;" and, by establishing a leasing system, "to stabilize the livestock industry dependent on the public range."

Interior Secretary Ickes implemented the Act by creating a Division of Grazing to administer the new grazing districts that it called for. The GLO was also given authority to administer public rangeland—including western Oregon—outside the grazing districts. Permits were given out to ranchers who could show that they had range experience, and who owned enough land to support their herds during the months when the public range was closed. The first grazing fee was five cents per animal unit month (AUM). This act appears to mark the earliest shift of the GLO from a land disposal to a land management agency—a shift that would be confirmed just a few years later when the GLO (later the BLM) was given management responsibility over the O&C timberlands.

In 1941, the Grazing Service tried raising its fees to a level more consistent with post-Depression private land leasing and Forest Service grazing fees. Western ranchers, led by outspoken Nevadans, raised a ruckus, and Secretary Ickes backed down. In 1944, a new Grazing Service director tried it again, with similar results. In frustration over the ability of powerful western Senators to block even modest grazing increases, Congress cut the Grazing Service's budget in half. A couple years later, the Grazing Service was merged with the General Land Office and became the Bureau of Land Management, bringing grazing administration of both district- and non-district-based grazing under one roof.

The issue of equitable grazing fees continued to plague the BLM's grazing managers throughout the last half of the twentieth century. In 1947, administrators finally did raise grazing fees , although modestly. They raised them again in 1951, now reaching 12 cents per AUM. This permitted the BLM to increase its rangeland management staff and inaugurate new rangeland programs such as those for the eradication of halogeten, a weed poisonous to cattle. By 1960, grazing fees were up to 22 cents per AUM; then to 44 cents by 1970, and to $2.36 by 1980. The Reagan Administration dropped them to $1.35 by 1987.[71]

Gene Peterson says that when he first came to the district in the late 'thirties there were no grazing leases on BLM land. Still, "grazing was occurring" on BLM lands, he says, throughout the Applegate region. It would have been hard to prevent it, since BLM and Forest Service lands were interspersed in those days, and the Forest Service had an active leasing program on the lands it managed. "So I started a program of leasing the BLM land and the public domain for livestock grazing," Peterson says. He asked the Applegate ranchers to lease the O&C lands that were interspersed with the Forest Service lands they were leasing. He even got them to pay the BLM the same leasing fees they paid the Forest Service, even though the Taylor Grazing Act had established lower fees.

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[71]Material in this and previous three paragraphs drawn from Muhn and Stuart, *Opportunity*, pp. 37, 38, 41, 48-49, 64, 81, 136, 208, 239.

Peterson admits that during his time he "did observe personally" some overgrazing, primarily on National Forest lands in the high elevation meadows of the Applegate watershed: McDonald Basin, Donomore Meadows, and several others. There was "quite a little erosion in the highly erodable decomposed volcanic soils at the higher elevation," he says, because "they were running too many livestock in there." He remembers that sheep were reputed to be "pretty hard on the meadows." Gradually they were eliminated from the high range, and cattle grazing substituted. "But I don't know if cattle are much better," he says.

Hamner points to the high mountain meadows as grazing-related problem areas during his years in the Applegate Ranger District. He says he thinks the upper Silver Fork region "was really grazed out at one time." Before he came in the late 1960s, the Forest Service had already tried to remedy the erosion problem by carving contours into the sloping meadowlands. "They tried all kinds of things to improve the range up there," he says. He thinks they've succeeded. "Ranger Marlega was pretty well range oriented. An awful lot of fences were built to help improve the range."

With the influx of people and the emergence of timber as a use priority on public lands, lands available for agricultural use have declined on both the private and public fronts. This is particularly noticeable with regard to grazing. At the beginning of the post-1970 population surge, there were some thirty-seven ranchers in the Applegate drainage. By 1994, the number had declined to five or six.[72]

Ranchers themselves appear to feel agencies are "squeezing cattle out." This viewpoint is understandable in light of the grazing industry's almost unlimited access to public lands allowed in the past. High country grazing "is now restricted to the Beaver Creek area and the Bigelow country near Grayback."[73]

With the fragmentation of the land base, farming as well is on the decline within the study area. A 1985 study says that the Illinois basin's soils

> limit intensive farming in much of the Illinois Valley area. Livestock production is the basis of the farm economy. Pasture and forage production are the most common agricultural uses of cleared lands. . . . Grass, hay, and silage are the most extensive crops grown.[74]

At the same time, the study admits that the dairy industry is one of the better livestock enterprises currently in the Illinois Valley. "The second largest dairy in the State of Oregon" is located there. Other signs that newer, specialty agricultural enterprises are replacing the older ranching culture is this study's observation that ornamental nursery stock, Christmas tree plantations and vineyards are potential growth industries.[75]

According to one point of view, farming in the Applegate "will soon be a thing of the past,"[76] If this is the case, it may turn out that farmers who proved able to withstand climate, pests and disease, changing markets, and lack of water will finally succumb to population influx and the rising real estate prices consequent of this new demand for residential land. If so, their fate comes full circle to one shared with the natives they themselves displaced in an earlier influx.

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[72]Kevin Preister,*Words into Action*, The Rogue Insitute for Ecology and Economy, 1994, p. 47.
[73]*Ibid.*, p. 47.
[74] *Rogue River Basin Report*, 1985, p. 260.
[75]Ibid., p.260.
[76]Preister,*Action*, p. 49.

Mining Fades

After the brief rush of the 1930s, gold mining entered a period of decline and the ranks of miners in the study area steadily thinned out. Hamner says there was still activity in the upper Applegate in the 1960s. Palmer Creek miners were still digging those little tunnels (adits) into the hillsides or dredging the creek bottoms. Dredges also operated on Steve Fork. The "Cobb claims" on Elliott Creek were being scoured with dragline. He remembers that Eldred Cobb closed the Forest Service road through his claim to log trucks hauling from the Dutch Creek Timber Sale around 1967, forcing a steep up-and-down detour. In the Illinois Basin, as of 1982, there was one active placer mine on Sucker Creek, with six other mineral sites being explored.[77]

Although mining has continued to fade in the study area, scores of mining claims are still on the books for the Applegate and Illinois Valleys. If they were all suddenly activated, and their water rights utilized, they would suck both valleys dry. Virtually none of them are currently active, however, and without major changes in the commercial demand for the minerals found in this area, there is little prospect that mining will revive.

By 1960, most mining in the Illinois Valley "consisted of sand and gravel operations." The same alluvial deposits of sand and gravel that miners fingered are sources of materials for concrete, road-building, septic fields and other construction needs. One study estimated that 640 million cubic yards of sand and gravel "lie along the Illinois River riparian areas."[78]

Water Stories: Applegate Dam

"Highly Erratic"

A government study in 1985 summarizes in understated tones the water history of the study area: "Annual flow pattern of the Applegate River is highly erratic."

Annual flows in both the Illinois and Applegate Rivers have fluctuated, historically, from barely a trickle during the three summer months to gushing January and February torrents that amounted to from fifteen to twenty-five times the normal summer flow. By the mid-twentieth century, at least, high summer ambient air temperatures and high summer water withdrawals for agricultural purposes left the Applegate River slimy and bad-smelling by August. Winter water temperatures of below 40F degrees rose dramatically by late summer to over 70F degrees, sometimes as high as a fish-killing 82F degrees.[79]

All this was part of a weather pattern that was notorious among the earliest Euro-American settlers for its wild fluctuations. A Jacksonville newspaper made the point nicely in 1870:

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[77] *Rogue River Basin Report*, 1985, p. 261.

[78] *Ibid.*, pp. 242-3, 261.

[79] These figures are drawn from a variety of documents listed under "Applegate Dam Sources" in the bibliography, which gives an identifying number for each after the code "AD" This paragraph draws on the following: AD #12, p. 192; AD #9, p.4.

> It is getting to be pretty well conceded that about all anyone can tell of Oregon weather is what he actually perceives or experiences. It is the most fatal climate on weather prophets we know of.[80]

Early newspapers are full of wonder at the extremities to which local weather patterns tended: hotter than normal, cooler than normal, wetter than normal, drier than normal. Already in 1852, just a couple years after permanent white settlement, residents lost their crops due to what historian Walling calls "the unusual drought of that year."[81] The end of June, 1868, brought heavy rains and near-freezing weather, cold enough to make saloon-keepers fire up their wood stoves and anyone going outside to wear their heavy winter coats.[82]

The summer of 1869 illustrates southern Oregon's increasingly usual extremities at work. In early June, local citizens were complaining that the weather was extraordinarily dry and warm, causing premature parching of valley grasses. By early July, crops were languishing, usually year-around streams were drying up, irrigation water was in short supply. Then, on July 31, a huge thunderstorm inundated the region. Dry Jackson Creek became a torrent, floodplains were washed-out, "numbers of tall pines and rugged oaks were torn from their firm foundations." Thousands of dollars of damage were reported. A week later, the weather was cool and cloudy with plenty of promise of rain, but "the rain don't come worth a cent."[83]

Walling, hungry for generalizations, shows a rainfall average in one portion of the Rogue basin of about 23" for the years 1854 to 1865. But a look at the yearly rainfall amounts reveals that the "average" represents a swing between 15" and 30".[84] One wonders whether "normal" or "average" do not have to be considered purely fictional terms when they are applied to southern Oregon's weather, statistical calculations that have no literal reference to any actually existing condition.

"Raging Waters"

Floods, in particular, have been prominent among the weather-caused extremities since Euro-American settlement in the study area. The Rogue River Courier reported, after the inundation of 1903, that "it is the history of this valley for the past half-century that an abnormally high water occurs at periods averaging ten years."[85] An 1852-3 flood was quickly surpassed by the 100-year record-setting flood following the heavy rains of November and December 1861. "Some communities were completely wiped out by the raging waters and none escaped serious damage," report Haines and Smith. "Bunkum was completely inundated and all of the flumes and sluices on the Little Applegate and lower Sterling Creek disappeared in the roiling waters."[86]

For those stricken with the mining fever of the times, the flood of 1861 was not entirely unwelcome. "Miners surveying their claims after the floods subsided," we are told, "felt that the gains equaled their losses." The Saltmarsh family felt lucky to have the help of floods in removing the overburden on their mining claims, getting them to the gold-bearing gravels all the more

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[80]Jacksonville *Democratic News*, October 22, 1870.

[81]Walling, *History*, p. 339.

[82]Jacksonville *Reveille*, June 27, 1868, p. 3.

[83]Jacksonville *Democratic News*, June 5, July 10, July 31 and August 7, 1869.

[84]Walling, *History*, p. 300.

[85]Rogue River *Courier*, January 29, 1903, in Hill, *Josephine*, 1976, p. 53.

[86]Haines and Smith, *Gold*, p. 37.

quickly.[87] On the other hand, many Applegate miners reported having their mining flumes and dams washed away, losing them up to two months of mining work. The county tax agent trying to sell the required mining licenses to Chinese miners in the Applegate had to return almost empty-handed since "the Chinamen's claims were damaged almost beyond redemption by the high water." In addition, bridges, boats, fences and feed crops were all reported "swept away" in the flood, and one farmer reported water three feet deep in his house.[88]

Major floods continued to plague residents of the Applegate and Illinois Valleys in 1866, 1881, 1890, 1903, 1907, 1909, with minor flooding events interspersed. A flood in 1886 "devastated Sterling Creek" and buried the Saltmarsh claims in Sterling Mining Company debris, no doubt changing their opinions about the mixed blessing of high waters.[89] In 1903, according to the Rogue River Courier,

> the Applegate country suffered very heavily. Its valley is narrow and the land is low and sandy. In many cases considerable areas of ground were swept away. Practically all the fences are gone and the general devastation is very great. One man of competent judgment estimates that is will take at least five years to recover from the effects of this flood.

The same flood swept away the Deer Creek bridge and battered the bridge across the Illinois "on the stage road beyond Kerby" with floating trees.[90]

Dutch Offenbacher remembers family stories of the 1890 flood, which old-timers called "the largest flood on Applegate." During his early lifetime, though, the flood to remember was in February 1927, when his father lost his fences and much of the topsoil in his newly-plowed fields. Frances Port Clark was only eight years old at the time. She remembers that the 1927 flood washed out the approach to the McKee Bridge, which kept her out of the Beaver Creek School until the waters receded.[91] On the upper Applegate, the Elliott Creek bridge at Joe Bar, as well as the Middle Fork and Carberry Creek bridges were lost to the swirling waters.[92] According to the Grants Pass Courier, the Rogue River was "swept clear of every bridge between Grants Pass and the Pacific Ocean" during the 1927 flood. At one time, the Rogue River rose "at the rate of one and one-third feet in forty minutes." The Siskiyou National Forest lost five miles of its Rogue River trail and suffered $75,000 in damage to bridges, roads, trails and telephone lines. The Wilderville irrigation district's hatchery incubators and flumes were also demolished.[93]

Although it occurred before she and Fred moved back to the river, Ethel West remembers being told about the 1927 flood. It was "a good one," she says. Edwin Taylor lost his bridge that year, for the second or third time, so "he built a bridge back at that time that he thought would never wash out again." Fred remembers a "real nice alfalfa field" that is nothing but gravel now because of the 1927 flood.

Ethel and Fred experienced several high waters during their stay on the river. The next "good one" after 1927 was 1955, when Fred tried to clear a big log-jam that threatened his bridge. He tied a ladder onto the bridge and climbed down it with his saw. After he cut enough of the logs to move the jam, the rushing water swept the bottom of his ladder downstream, leaving him clinging to the

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[87]Ibid., p. 37.

[88]Jacksonville *Sentinel*, January 13, 1862, quoted in Hill, *Josephine*, 1976, p. 53.

[89]Haines and Smith, *Gold*, p. 55.

[90]Rogue River *Courier*, January 29, 1903, in Hill, *Josephine*, 1976, pp. 54-5.

[91]Joyer, *Recollections*, II, n.p.

[92]Brown, *Rogue River*, 1, p. 240.

[93]Grants Pass *Courier*, February 21 and March 4, 1927, in Hill, *Josephine*, 1976, p. 55; and Grants Pass *Courier*, September 24, 1971.

underside of it for dear life. Eventually, the ladder righted itself a few times momentarily, and he was able to climb to safety. "I just had to let my saw go down the river," he says. That's the last time he tried that.

Ethel says 1955 is when the Offenbacher bridge washed away. Dutch Offenbacher remembers that too. The flood of 1953 had taken out his uncle's bridge for the first time, and the 1955 flood took it out again.

> We bought the ranch in October of 1955, and in December of '55 we lost the bridge, so we owned a ranch over there with no access. We had to go clear to Applegate and bring the tractor up through there and over here to farm and take it clear back so Dad could farm here and it was quite a hassle.

By the time the big flood of 1964 came, the Offenbachers had replaced that bridge with low-water bridges.

> My dad built the first one, and we built the second one, we finished it on December 23rd, and the river went over it on the 25th, but it stayed in, and the bridges have all stayed, and since then there's been several others. . . . This river's got a tremendous headwaters, as you know, and people don't realize what water can come down here. In 1974, now, there was 18" of water against the foundation of this house.

Fred West also remembers the 1964 flood. "Our last bridge went out," he says. That was the bridge they had moved from the City of Rogue River and, with county help, reconstructed on their property 16 feet off the water on piers footed into bedrock. The high water "upset that bridge and took it out," and swept it downstream, right under the Cantrall-Buckley bridge. "And we never did find any of it, except one plank. We don't know where it went. The decking was 4" boards, a foot wide, there was seventy-five of them on that bridge." Fred is puzzled about "where all that iron went," too. Ethel thinks maybe it's near the mouth of the Applegate, covered by the tons of silt the flood washed off the fields of an adjacent mint farm. Some time later, when he was considering a property downriver for purchase, Fred found one of the boards that he had notched in a peculiar way when they were constructing it. The board was sitting about twelve feet up in a tree. At the moment he spotted it, a real estate agent was telling him how high waters "never bothered this land here." Fred told the realtor he wasn't interested in buying that particular piece.

Damming the Applegate River

That saw wasn't the only thing Fred lost to the raging floodwaters in 1955. Ethel says a good bit of the soil at the lower end of the ranch washed downstream as well.

> And that was the reason that we were supporters of the dam. We saw what could happen. A little of it happened to us, it didn't hurt us badly, but . . . Francis Krouse's place was damaged, and clear down below that there were ranches that we remember as meadows, farm fields and hay land, that is nothing but rocks and trash now.

By the 1950s, Americans were beginning to believe there wasn't any reason they should have to put up with the kind of mayhem that had been occurring since white settlement on the Applegate and Illinois Rivers. After the 1955 flood, which received nationwide attention, Southern Oregon citizen groups began promoting a major flood control project for the Rogue Basin. Congress sent a committee to survey flood-damaged areas on the West Coast, held a hearing in Medford to gather testimony on the need for flood control, and appropriated funds for an Army Corps of Engineers study of a Rogue Basin flood control project. In a further series of hearings, southern Oregon

citizens weighed in primarily in favor of building a series of dams, but with strong opposition to "any flood control plan detrimental to the fishery resource."[94]

In 1961, after the Corps carried out a series of fisheries-oriented and other technical studies, it announced its recommendation that three dams be built: at Lost Creek, Elk Creek, and the upper Applegate River. On the Applegate, the dam would be an "earth and gravel embankment about 230 feet in height," 24 feet wide at the top and about 1,325 feet in length. The reservoir behind the dam was to be about four miles long and cover about 945 acres at maximum flow. Except for 40 acres of national forest land, the acreage covered by the reservoir would be private land. Most of the surrounding acreage, used for recreation and management, would be national forest land.[95]

Congress appropriated planning and start-up construction funds for all three. Construction was scheduled to begin on the Applegate Dam in 1973. By the time that year rolled around, the 1964 flood and another major flood in 1972 had made the case for a dam on the Applegate River even stronger. The Corps' studies promised that a dam would "be capable of reducing most flood peak discharges at Applegate by about 50 to 60 percent," which meant that, if there had been a dam on the river during the 1890, 1955 and 1964 floods, the river's rise at Applegate would have been diminished by between four and six feet.[96] The Corps projected that, upstream from the mouth of Beaver Creek, a 100-year flood like the one in 1964 would have been reduced to a level lower than what one would expect of a ten-year flood. Downstream, because of in-flows from streams along the way, it would have been reduced to somewhere between a ten- and twenty-year flood.[97]

These were not the only benefits that the Corps' studies and other planning documents envisioned. A dam could supply greater quantities of water for irrigation, particularly for the potentially rich agricultural lands like those along the Applegate mainstream and in the lower Williams Valley. The dam's projected irrigation water storage of 26,000 acre-feet would help make up to 5,000 acres of new agricultural lands available for development in future years while providing a more reliable supply of water to the 9,400 acres that were considered inadequately supplied.[98] More adequate water supplies would also encourage the growth of industry, whose needs could not currently be met "from natural stream flows." Water storage projects "would help the entire Rogue Basin in meeting its future recreational needs." Improving minimum flows would help meet "future needs for pollution abatement."[99]

On the crucial issue of fisheries, planners predicted that the Applegate Dam would make available a year-round supply of cooler water to downstream spawning grounds, resulting in several hundred thousand dollars worth of increased sport and commercial fishing activity. On the other hand, the reservoir itself would also "reduce the miles of streams available to migratory fish." The U. S. Fish and Wildlife Service seemed satisfied that permanent facilities would be provided to pass migrant fish through the Dam, and that the planned fish production facilities would "compensate for loss of spawning areas rendered unusable by the reservoirs, losses of fish associated with handling and delays at the passage facility, and losses of downstream migrants in the reservoir." It predicted improved spawning habitat for salmon and steelhead downstream of the dam, particularly if flow releases never exceeded a temperature of 60 degrees Fahrenheit. It recommended "that construction activities. . . be accomplished in a manner to avoid siltation of streambeds or muddying of basin streams" and that measures be taken to minimize deer losses in irrigation

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[94]AD #9, pp. 1-2.
[95]AD #4, pp. 44-45.
[96]AD #9, pp. 2-3, 5.
[97]AD #3 p. 14.
[98]AD #4, p. 48; AD #5, p.4.
[99]AD #1, pp. 250-3.

canals. It also noted that the reservoir would "destroy habitat used by big game, upland game, and fur animals" as well as "nesting habitat for mallards, wood ducks, and mergansers."[100]

The response of the Rogue River National Forest to the proposed dam was enthusiastic. It noted that most of the land within the project area had been "either cleared and cultivated or logged and relogged leaving light timber stands and brush," so that any impact on national forest timber would be "practically nonexistent." "No known archaeological or historical features of significance" were threatened by the project. Problems with local ranchers were foreseen, since some of their lands would be flooded. Rogue Forest managers expressed additional concerns and passed along their recommendations for clearing and construction processes, fire protection, road systems, and general safety.[101]

Much of the Rogue Forest's report discussed the dam's potential for recreational development on Forest Service land, since, in its opinion, the reservoir would become "one of the major attractions in southern Oregon." The report estimated that the project area, which in 1960 supported about 1,900 fishing and hunting visitor-days and 10,700 general recreation visitor-days, could be seeing 40,000 fishing/hunting visitor-days and over 200,000 general recreation visitor-days by the turn of the century. To meet these needs, it proposed an extensive array of recreational facilities: boat launches, swimming sites, bridle trails, vista points and so on. These new recreational potentials, according to this report, represented a "tremendous gain," and far outweighed any expected loss in resource potential.[102]

Public opinion in southern Oregon generally agreed with the ringing endorsements of these official agencies. A series of public hearings were held between 1956 and 1976 in Medford and Grants Pass. In its report on the first of these hearings, the Army Corps of Engineers noted that "almost all those who presented oral testimony favored the entire plan as proposed," and that among those whose names appeared on written letters or petitions, "a substantial majority favored the plan." All the organized bodies that commented on the plan favored it as well. The Corps could find "no organized opposition."[103]

Damning the Dam

But pro-dam sympathy was not unanimous. The three hearings held before 1961 demonstrated that, while opinion was 130 to 1 in favor of the Lost Creek Reservoir and 200 to 1 in favor of the Elk Creek Reservoir, those who commented on the Applegate Reservoir favored it by a ratio of only 11 to 1. The Army Corps of Engineers speculated that

> the smaller ratio of support for Applegate was due in part to the lesser extent of interest in the Applegate as compared to Rogue River proper and, apparently, to the mistaken belief on the part of a few that project construction would result in loss of present State-granted rights to free use of natural streamflows for irrigation.[104]

Fifteen years later, while the fate of the dam project was still being hashed out, Julie Wheeler of Jacksonville confirmed that these fears had not died.

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[100]AD #5, pp. 28, 4-9, 30.

[101]AD #4, Exhibit 7, United States Department of Agriculture, "Impact Report for the Applegate Dam and Reservoir," pp. 2-5, 6, 16.

[102]AD #4, Exhibit 7, United States Department of Agriculture, "Impact Report for the Applegate Dam and Reservoir," pp. 2-5, 6-8, 16.

[103]AD #4, pp. 28-29.

[104]AD #4, pp. 28-29.

> Farmers and ranchers who now enjoy benefits of spring flood waters above their existing rights may lose this benefit when the water comes under the control of the Bureau of Reclamation. . . . The surplus water will be taken away and irrigation water will cost so much that they will be forced to subdivide their farms and ranches in order to survive.[105]

To Wheeler's knowledge, this had been the "common procedure in many areas" where the government had built a dam like the one planned for the Applegate.[106]

Wheeler's letter was a sign that, by the 1970s, the dam's opponents were prepared to launch a more organized battle against the Applegate Dam. The Upper Applegate Grange Hall was the scene for one episode in March, 1973. Walt Hoffbuhr and Henry Stewart supported the Army Corps of Engineers' conclusions on potential benefits of the dam to the Applegate community. Roger Vanderbeek, Ira Edwards and Carol Doty spoke against the project. Professor Wayne Linn, of Southern Oregon State College, "noted the loss of fish spawning beds, a deer herd and the Siskiyou salamander" and "challenged the Corps' contention that [water] quantity is a quality enhancement factor." He thought that mercury-bearing ores at the dam site might bring mercury mineralization in the reservoir to unacceptable levels. "Reservoirs do not improve water quality," he said. "No river, undisturbed by man, was ever improved by a dam."[107]

The last campaign to stop the dam took place in 1976 and 1977. Jackson County Commissioners Jon Deason and Tam Moore accused the Army Corps of Engineers of propagandizing in favor of the dam when they should have been providing objective information, and doubted the County's ability to pay its share of the on-going costs of the dam after it was completed.[108] SAVE (Save the Applegate Valley Environment) predicted dam-busting landslides like the one that had recently dumped half a million cubic yards of earth into the Sturgis Fork.[109] The Oregon Student Public Interest Research Group accused the Corps of failing to address the mercury-contamination issue and of over-estimating benefits for flood control, irrigation and economic development. The Lithia Times criticized the Corps for ignoring the cultural resources that would be obliterated by the dam, leading the Corps to quickly appoint a Southern Oregon State College anthropology professor to conduct a cultural resources study.

Other opponents predicted that the dam would neither supply sufficient cool water to allow fish spawning in dry years nor adequately reduce flood damage. The Corps' was accused of cooking its figures to give the illusion of higher cost-benefit ratios that could be supported. Kathy Ging, of SAD (Stop the Applegate Dam) praised Jimmy Carter for questioning the project on the basis of its rapidly mounting price tag. "The same fifteen men have been pushing this dam for the last 55 years," she said. "Now that the interest rate has gone up, . . . why build a dam to protect a few landowners in a flood plain?"[110]

Ultimately, the friends of the Applegate Dam prevailed over its enemies, despite the fact that an Army Corps spokesperson admitted that the Applegate Dam would not entirely alleviate flood damage and would return only 64¢ on every dollar invested.[111] A November 1976 referendum showed that about two-thirds of the voters in Josephine County but only 56% of Jackson County's voters supported the project. The vote was taken as an endorsement of the project. Dennis Hoffbuhr, leader of a group called ROAR (Revitalize Our Applegate River) called it an

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[105] Julie Wheeler, Letter to the Editor, Medford *Mail Tribune*, September 5, 1976.

[106] Ibid.

[107] Medford *Mail Tribune*, March 28, 1973.

[108] Medford *Mail Tribune*, August 25, 1976.

[109] Medford *Mail Tribune*, Oct 13, 1976.

[110] Medford *Mail Tribune*, March 30, 1977, October 27, 1976.

[111] Medford *Mail Tribune*, September 23, 1976; Jackson County *Times*, April 1, 1977.

"overwhelming endorsement." At the local level, he was probably correct. The Ruch precinct voted 411 to 250 in favor of the project. Jim Christopherson of SAVE surmised that even those who opposed it voted in favor because they worried that if the dam weren't built, nothing at all would be done for flood control and irrigation. "The dam is better than nothing," Christopherson said.[112]

Allen Hallmark, a reporter for the Medford Mail Tribune, summarized what seemed to be the weight of popular opinion: "The main purpose of the dam is flood control in wet years and water flow improvement in dry summer months. Floods destroyed millions of dollars worth of farmland in 1964, 1972 and 1974" and "low water . . . has depleted fish habitat and made favorite swimming holes scummy in some areas." He admitted that the low water problem was not entirely the consequence of natural processes. It had been "caused perhaps by watershed damage and irrigation withdrawals." New technologies, he seemed convinced, following the lead of the champions of progress, would repair the unforeseen consequences of the old.[113]

"It Was Water Impoundment that Won the West"

In June 1978, ground was ceremonially broken to begin construction on the Applegate Dam. Harlan Cantrall, director of the Jackson County Soil and Water Conservation District and possessor of one of the oldest Applegate Valley names, reminded the crowd of the history of floods and droughts in the valley. He thought that "after each flood the Applegate Valley was something less than it had been before." The dam would change all that, he thought.[114]

Construction of the Applegate Dam took two years, a year less than expected. In the process, the general contractor, from Omaha, Nebraska, became the last in a long line of westward-facing American gold-seekers. He extracted $2.5 million in gold from the gravel that built the dam.[115] Archaeological workers excavated numerous sites in an effort to mitigate the effects of the dam on Native American cultural resources. Hundreds of artifacts, mostly projectile points and grinding tools, were found.[116]

In 1980, a year ahead of schedule, the dam was completed and water impoundment begun. Gradually, waters running off the high Siskiyous covered properties where the Swaynes, Harrs, Watkins, Winninghams, and Collings had once lived, and where the Copper Store had served the residents of the upper Applegate.[117]

The following May, Senator Mark Hatfield showed up on the shores of the Applegate Lake to dedicate the project. His enthusiastic support had assured that Congress would appropriate the necessary funds for the dam to become a reality. He had been instrumental in blocking President Jimmy Carter's suggestion, in 1977, that the Army Corps of Engineers shelve the Applegate Dam project because of high inflation and budgetary concerns. Hatfield assured his listeners that the Applegate Dam would help southern Oregon deal constructively with an impending water crisis that "would make the oil crisis look like nothing." He offered the crowd a line for which he has become famous in many times and places: "It was not the six-gun, it was water impoundment that

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[112]Medford *Mail Tribune*, November 3, 1976.

[113]March 25, 1979.

[114]Medford *Mail Tribune*, June 19, 1978.

[115]*Oregonian*, November 9, 1980.

[116]Ashland *Daily Tidings*, November 8, 1979.

[117]Black and Black, *Ruch*, p. 148.

won the West." It would be "water impoundments and conservation" that would "sustain the West," he thought.[118]

In the end, this particular water impoundment, originally estimated as a $15 million project, had cost the taxpayers $96 million.[119] A Water Resource Department study, in 1985, estimated that the dam would supply enough water to irrigate "1,350 acres of presently dry ground" during all but the driest years. A quarter-century earlier, the figure had been 5,000.[120]

"You Can't Stop Progress"

Ethel West remembers that every summer the Applegate would almost run dry. "There'd be long strings of moss in it and it would be smelly," she says. When they lived on the Taylor place, they "dairied heavily," milking up to 103 cows at one time. They had to water the cows from their well, since "our milk cows wouldn't drink the river water." And she remembers that "lots of times there would be a notice in the paper that would caution people not to swim at the Cantrall-Buckley swimming hole." But by the next winter and spring the water would get very high again, and "boil." "That was sort of the history of that river," she says.

> I remember my grandparents and my parents talking about high waters there. And that was the reason we favored, and we worked as hard as we knew how to, to promote the dam.

But Ethel West also admits that the dam has changed the looks of the valley.

> It's hard to even visualize any more and remember where all of the places were. We sorta do, but you have to think about it. That is a thing that I don't like about dams. Those are the bad things that dams do. It has changed the whole area until it is practically a different community. Of course, some of that would've happened anyway by people selling off plots of land and subdividing their places. But it's happened more.

The other change she notices is the traffic. Before the dam, recreational traffic was quite modest. There wasn't any reason for folks to drive up there. "Now there is, and there's lots of it." Fred West is philosophical: "Same thing's happened everywhere in the country," he says. "But you can't stop progress."

Dutch Offenbacher's Uncle Fritz fought the dam from the start, and continues to be an opponent. But Dutch agrees with Ethel and Fred West. He thinks the tax-payers' moneys have been well spent.

> That dam has been a godsend to this valley. We've been going through a drought season. We're getting so many people living on here now, and pumps are so easy to come by. I've seen, years before the dam, right down there, you could walk across it in tennis shoes, you could step on the rocks and cross that river and never get your feet wet. That's a fact. It was getting lower and lower as the years went by—mainly, I think, because everybody was putting a pump in it.

Since the dam has been built, the Bureau of Reclamation hasn't yet shut anyone's water off, to Offenbacher's knowledge. But he's been expecting them to.

> The inflow got to ten cubic feet a second one year after the dam was in. . . . That irrigation ditch right there when full would carry ten cubic feet a second. I was surprised that they didn't shut it off. If the dam had not been in, there would have been ten cubic feet a second

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[118]Medford *Mail Tribune*, May 28, 1981.

[119]AD #4, p. 51; Medford *Mail Tribune*, May 28, 1881.

[120]AD #12, p. 193.

> going by up there, and the Little Applegate would have contributed nothing. That year all your smaller tributaries would have contributed nothing either, so it would have been a terrible year here [if the dam hadn't been in].

Dutch Offenbacher is also realistic about the dam's potential for flood control.

> We haven't really had a testing winter yet. We had pretty good rains this year, but they were pretty scattered, heavy here, light there, and if we get another winter like '74, then we'll test the dam. As far as I'm concerned, the dam has not been tested.

In January, 1991, however, the Medford Mail Tribune carried this headline: "Applegate Lake Level Drops to Dangerous Low." It reported that the lake was at its lowest level since it had opened in 1980, and that so far winter moisture was producing what amounted to only half of what was flowing out. If water flows out of the dam were reduced, as expected, downstream gravel beds were bound to be exposed, threatening the season's salmon egg incubation. Fred West had it right: "You can't stop progress."

The biggest difference Dutch Offenbacher sees in the Applegate River since the dam was built is the thriving of the fishery. When he was a kid, he'd go down to the river and catch "a mess of steelhead" before breakfast. But the steelhead spawn in the little tributaries, which gradually got pumped so dry that steelhead diminished over the years. Dutch says a "fair amount of cut-throat" are showing up again in the river. The cut-throat is a native fish, he says, that were extinct in the river and are coming back. As for salmon, the Murphy dam used to stop them, so that he never saw them when he was a kid. Now there's a fish ladder around the Murphy dam and a reliable supply of water because of the Applegate Dam. So there's "a big run" of chinook salmon past Dutch's house every fall.

"An Irreplaceable Loss of Alluvial Land"

When the Rogue River Basin Project first got rolling, in the late 1950s, it included the Illinois Valley within its scope of study. Cycles of drought and flood have been as troublesome to settlers there as in the Applegate. As one recent example, John Ifft remembers the 1964 flood, "an enormous flood that went down Deer Creek and wiped out all the riparian vegetation," washing out the Deer Creek access road as well.

The first project publication put the problem in these words:

> A continual battle is being waged [in the Illinois Valley] during periods of high flow to prevent erosion damage which occurs with bank-full stages as well as destructive damage from land inundation. . . . Some attempted methods of bank protection, such as a line of logs fastened to the bank and extending out into the stream to deflect the current, have proven successful for a year or more and then suddenly failed due to a streamflow pattern with different characteristics than those preceding.[121]

Even to the degree that they were successful, bank revetments such as these were considered too costly to enable widespread use by private landowners. The 1955 flood had caused "widespread erosion damage" in the Illinois Valley, followed by more of the same in the winter of 1957-8, "with three destructive river stages taking place during that two-month period." Damages in the Deer and Sucker Creeks and the East Fork were "estimated by observers to be greater than those which occurred in 1955." These floods in the Illinois Valley, although very destructive, were considered to be "less damaging than the erosion occurring with extended periods of bank-full stages of flow." You can clean up after a flood, but extended periods of rapidly flowing water

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[121]AD #1, p. 63.

"result in an irreplaceable loss of alluvial land."[122] The statement, while true, carries with it the irony of describing riparian areas where hydraulic giants had purposely washed away tons of fertile topsoil because it constituted a hindrance to the search for gold.

By the time the first extended study of the Rogue River Basin Project was completed in 1961, the Illinois Valley was eliminated as a candidate for a major water impoundment program, at least for the moment. Possible sites on Deer Creek near Selma and on Sucker and Althouse Creeks were dismissed, even though the Illinois River was the Rogue River's largest single tributary. The Army Corps of Engineers offered this rationale:

> Because agricultural lands and developments are limited to that part of the Illinois watershed upstream from Eight Dollar Mountain, and because storage on the Illinois would create no benefits on Rogue River proper, it was found that potential flood-control benefits would be very limited.[123]

But the Bureau of Reclamation agreed to continue its study of the problem.

When the State Department of Water Resources released a new study of the Rogue River Basin in 1985, its primary concerns seemed to be with the limitation for economic development in the alluvial plain east and south of Cave Junction and the jeopardy to fish life caused by erratic Illinois River flows. Both Deer Creek and the East Fork Illinois River, and their tributaries, either dry up in the summer or have inadequate flow to satisfy existing water rights, some of them extending back into the nineteenth century. Siskiyou National Forest, BLM and ODF&W biologists identified "major salmonid species problems" in the upper Illinois River and its tributaries "due to annual seasonal flows compounded by summer water withdrawals." Special problems for the major salmonid fish species were noticed on the Illinois River between Briggs Creek and the confluence of the East and West Forks.[124]

This report found several potential sites for water impoundment in the Illinois basin, but none of the scale to match the Applegate Dam, and none that might offer long-term effective relief from the cycles of flood and drought endemic to the valley. Its most enthusiastic recommendation: drill wells to tap ground water as "a significant alternative source for water supplies" both in the Deer Creek drainage and in the upper Illinois Valley. 56,000 acre-feet could be drawn out of the ground each year, it estimated, with "minimal impact on the surface water resources."[125]

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[122]AD #1, p. 63.
[123]AD #4, p. 38.
[124]AD #12, pp. 237-8, 260, 265.
[125]AD #12, p. 238.

The Romantic, the Sublime, and the (Ob)noxious: Introduced Flora

In 1852-1853, Maryum McKee traveled the across plains from Missouri to Oregon in a wagon train with her husband John, parents, and adult brother. They reached the Rogue Valley in August of 1853, "and by October John McKee had filed on a Donation Land Claim on the foothills of a mountain east of present day Medford, later named Roxy Ann Butte."

> Maryum had brought with her from Missouri a slip of a yellow rose bush, which she planted in the yard of their cabin. It took root and lived.[126]

John was lured into the Applegate drainage by gold, and when the McKee's set up house in Logtown, Maryum, once again, transplanted her yellow rose.

Who can know the reasons she gave care to a rose, nursing it across the country, spreading it from house to house until one finally became home? Perhaps it stood as a floral symbol of a distant ideal, of the land of birth, of family and friends left behind. Perhaps it was her attempt to order, to familiarize, a new yard in a new land. Perhaps, she simply liked yellow roses. Whatever Maryum's reasons, her rose became the "Logtown Rose," blooming still in her yard, slips blooming in the Logtown Cemetery and gardens and hedges across the area, immortalized in poetry.

[126] Black and Black, *Ruch*, p. 32.

The Logtown Rose

To the young and the old and one who knows
Let me tell you the story of the Logtown Rose.
It's the emblem of beauty that does display
The old pioneer of an early day.

It was back in the year of '63
When to Forest Creek came John McKee,
And then his friends all gathered round,
Cut logs for his home in old Logtown.

When his home was built, it was snug and warm,
It protected his children through winter's storm.
And Mirium spun yarn to make socks and hose.
Once in spare time, planted a yellow rose.

It was a tiny slip she planted in the ground;
Then its roots spread out, and slips gathered 'round,
As the years come and the years go,
Its friends would die, while the rose would grow.

It was a beautiful flower of yellowish hue,
For over 50 years, it weathered through.
To live as it did, you would never suppose,
But it really did, the Logtown Rose.

Now the nails that they used have turned to rust,
And the logs that once stood have turned to dust,
But remaining there as winter blows,
On this historic spot, stands the Logtown Rose.

Protect it, friends, as you pass by,
Give it a drink, don't let it die,
On the earth so dry from the sun so hot,
Please let the rose live on this sacred spot.

It's a friend of the family of John McKee,
Also a friend to that old oak tree,
Though too far away from the shade it gives
Through summer heat, so it may live.

So take care of it, friends, and do it soon
And in a very short time for you it'll bloom.
You see, my friends, it cannot cry;
It can only bloom and say good-bye.

Its breath is sweet; its heart is gold,
Now this is the story, as I've been told.
So long may it grow in sweet repose,
And bloom for you all, the Logtown Rose.[127]

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[127] Ibid., p. 39-40. "Logtown Rose" was written by Fred Law, born in 1879, who grew up along Forest Creek across from Logtown. His father, Alfred, married Catherine McKee.

Other immigrants to the region brought floral symbols of distant ideals as well. At Gin Lin's mining camp on the Little Applegate River, LaLande has identified a remnant "Tree of Heaven" (*Ailanthus altissima*).[128] Of root-stock from China, this tree stands as a monument to the ends individuals will go to recreate or remember home, or perhaps, as the common name in this instance suggests, to envision that which transcends home. The T'ang Dynasty (618-907) poet Han Shan tells of "trees of white jade"—the trees found in paradise—in the mountains of T'ien-t'ai. Perhaps Chinese miners in the Applegate region were thinking of Han Shan or paradise when they planted their own Tree-of -Heaven in the mountains of southwest Oregon.

Not all floral species introduced into the study area are of the romantic or sublime nature that the above examples might suggest. Himalayan blackberry (*Rubus procerus*) is an introduced species which has had extreme success in colonizing the study area. (Pacific blackberry, *Rubus ursinus*, is the only species of blackberry native to the area.) It is difficult to drive anywhere in the region and escape the sight of Himalayan blackberry along the road. Though it may be tasty, it is also tenacious as it expands, covering plants, encroaching upon roads, crowding fields, and clogging ditches.

In a manner similar to Himalayan blackberry, non-native grasses have also been particularly successful invader species, crowding out natives. Major native grasses include:

Idaho fescue	California oatgrass
western fescue	tufted hairgrass
California fescue	slender hairgrass
California brome	blue wild rye
Columbia brome	Harford's oniongrass

Major non-native grasses include:

cheat grass	dogtail
orchard grass	common velvet grass
bulbous bluegrass	Kentucky bluegrass
medusa head	

Cheat grass and medusa head are two of the especially noxious non-natives.[129] Cheat grass in particular is fond of over-grazed lands. It is able to invade areas disturbed by grazing, and establish itself so successfully as to inhibit the return of natives. Within the study area, this makes it well-adapted to expansion.

Within the Little Applegate sub-basin, Rolle has identified "low-mid elevation dry grasslands" as communities at risk of extirpation. In these areas, the "[p]rimary threat is invasion of non-native grasses and forbs." His estimate is that more than one-half of these grasslands are now completely dominated by non-natives, with most of the remaining areas "in the process of being converted." The root of non-native success lies over-grazing, the purposeful spread of non-natives, and the ability of non-natives to flourish in areas of disturbance.[130] It can be assumed that this situation exists in similar communities across the study area.

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[128]LaLande, *Sojourners*, p. 72.

[129]Barbara Mumblo, personal communication.

[130]Wayne Rolle, "Vegetation Appendix D," *Little Applegate Pilot Watershed Assessment*, p. D1.

What the Photographs Tell Us This Time

Throughout this report, photographs, comics, graphs, maps, and lithographs have all been utilized as a tool to enrich the story we have been weaving, to facilitate a visualization of environmental change and social dynamics across the landscape. In this final section, we utilize a series of "repeat photographs" -- same place, different time -- to focus more specifically upon change in particular places. The cliché is worth repeating: "A picture is worth a thousand words."

The Applegate/Illinois Divide: 1939 and 1969 -- The Aerial View of the Arrival of Management

The following photo series from 1939 and 1969 show the Applegate/Illinois divide from the air at these times. The 1969 series is at the top of the page; the 1939 series below.

The 1939 aerial series shows the eastern portion of T40S/R6W, and T39S/R6W, and the western portion of T40S/R5W and T39S/R5W. The flight line traces a north-to-south line—left to right in the photos—from the edge of Williams area clearings in the north, to Bigelow Lakes in the south. Caves Camp Road bends through the agricultural flats at the south-western edge of the Williams area. Caves Camp is the last cleared area before the forest closes rank and spreads south. The West Fork and the Right Hand Fork of the West Fork of Williams Creek rise from the edge of the Caves Camp clearing. The headwaters of Grayback Creek occupy a large portion of the center of this view. Bigelow Lakes lie in the southern portion of the photo; Oregon Caves lies out of view to the west of the lakes. Lake Mountain is visible to the right of the lakes, and Bigelow Cabin lies in a clearing south-east of the mountain, in the headwaters of the Sturgis Fork of Carberry Creek. The summits of Big Sugarloaf Peak and Grayback Mountain lie above their forested flanks, just out of view to the east of the photo.

Between these locations, the forest spreads largely undisturbed. A trail, invisible in this aerial view, connects Caves Camp and the Oregon Caves. The forest composition reflects the GLO description of earlier years, with southern slopes primarily "open and brushy." Ceanothus, manzanita, buckbrush, madrone, and chinquapin are prevalent in these more open areas. Large single trees are likely ponderosa pine. The majority of the trees visible, however, are Douglas-fir. Drainages appear particularly dense with conifer growth, likely cedar blending into the Douglas-fir matrix.

There are no roads across the area at this time, and the area stands largely unaffected by burgeoning activity in lower elevations to the west and east. Perhaps an exception to this situation is seen in the exposed slopes to the south of Lake Mountain. Here, heavy grazing took its toll on the grasses and other browse. Also, fire suppression had perhaps by this time allowed manzanita, buckbrush and other shrubs to spread further onto exposed slopes.

Nonetheless, the mosaic visible in this 1939 aerial series appears to be largely devoid of human disturbance. The Williams settlement appears only on the fringes of the area, and grazing and fire suppression need to be read into landscape analysis at this scale. The overall structural integrity of the forest appears fairly intact, consistent, even at this later date, with that pre-dating the arrival of Euro-American culture to the area. This integrity was short-lived beyond this time, however, as the logging boom of the post-World War II era awaited.

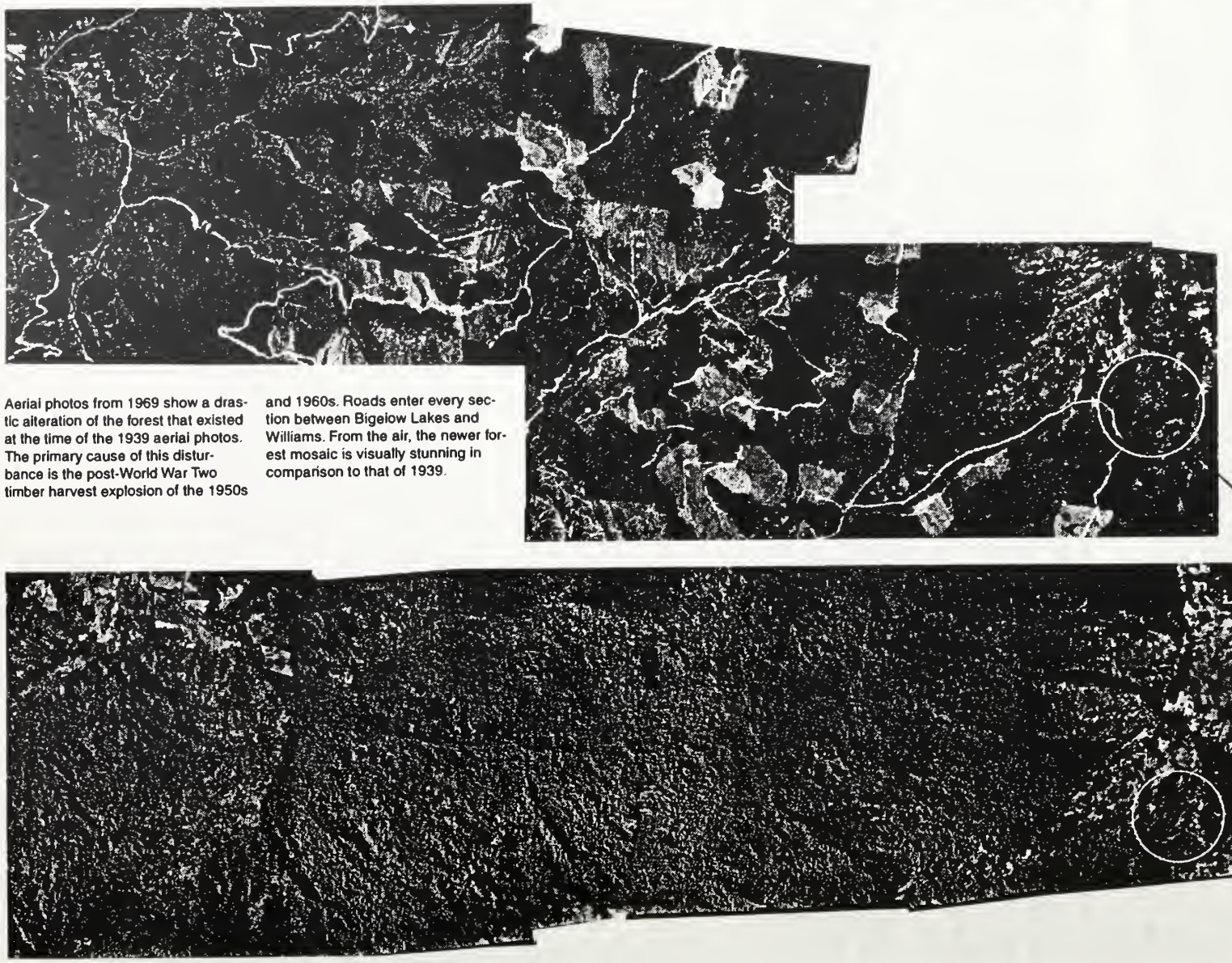
Aerial photos of the same area from 1969 show a drastic alteration and severe disturbance of the forest that existed thirty years earlier. The primary cause of this disturbance is the post-World War Two timber harvest explosion of the 1950s and 1960s. Roads crisscross the entire area, entering every section between Bigelow Lakes and the edge of Williams. A single strand links Williams and the Illinois Valley; the remaining roads served to transport the forest to mills. From the air, the alteration of forest in comparison to 1939 is visually stunning.

If we begin our view from the south, below Lake Mountain, the situation does not appear to have changed much. Grassy slopes and meadows appear to exist in the same locations. Shrub coverage has retained basically the same percentage of area coverage. A road, however, has pushed up the Sturgis Fork and been extended to Bigelow Cabin. Bigelow Lakes still stand surrounded by scattered conifer. A road loops into view just northwest of the lakes, built to access timber along upper Lake Creek.

Moving north, the disturbance of the landscape becomes much more apparent. The headwaters of Grayback Creek, below Low Divide, show large, clearcut patches. North of Low Divide, both the West Fork and Right Hand of the West Fork show clearcuts or heavy shelterwood cuts along their entire length to their junction near Caves Camp. Shrub coverage appears greater along these lower elevation drainages than in the upper regions. Clearcuts emerged as a new practice during the era between these photos. As Hamner says earlier in this report, clearcuts were "the big thing" in the 60s, as this photo series evidences.

In comparison with 1939 aerials, the major focus of cutting appears to have been in the most dense stands, particularly those along the upper Grayback and West Fork drainages. 1973 infra-red photos highlight this in the Low Divide area. The result of this era of logging in the region, as shown by these aerial photos, is the structural alteration of the inherited forest mosaic into a new mosaic of roads, clearcuts, re-stocking to various degree, and more extensive shrub coverage.

Applegate/Illinois Divide: 1939 and 1969 Aerial Photos



Aerial photos from 1969 show a drastic alteration of the forest that existed at the time of the 1939 aerial photos. The primary cause of this disturbance is the post-World War Two timber harvest explosion of the 1950s and 1960s. Roads enter every section between Bigelow Lakes and Williams. From the air, the newer forest mosaic is visually stunning in comparison to that of 1939.

Pyramid Peak: 1940 and 1991 -- One Effect of Wilderness

Pyramid Peak, at 6,451 feet, stands along the Siskiyou Crest at the southern border of the study area and is included within the Red Buttes Wilderness. Red Buttes was designated wilderness by Congress in 1984. "Wilderness" in this sense has a distinct definition. It reflects the legal meaning given in the Wilderness Act of 1964. In this act, wilderness is defined as land retaining a "primeval character," consequently needing preservation,

> in order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States . . . leaving no lands. . . in their natural condition.[131]

This is the legal language behind the designation of the Red Buttes as wilderness. What this does not address are reasons why people might want land in its "natural condition" preserved.

Some voices plead for wilderness for what might be termed romantic reasons. Wilderness, in this sense, is the realm of natural beauty, a haven from the disorder of civilization, or perhaps, a place one goes to find oneself. Other voices advocate wilderness for utilitarian purposes. Wilderness is a location for scientific research, or a final refuge for vanishing flora and fauna. Other voices blend these perspectives and think of wilderness as a tool for enhancing self-esteem, or as a model for healthy communities. Meanwhile, voices critical of the notion of wilderness see it as a hindrance to resource utilization, or a barrier to human dominion. All of these voices lie behind the Wilderness Act's definition of wilderness, trying to answer the question "why—or why not—wilderness?"

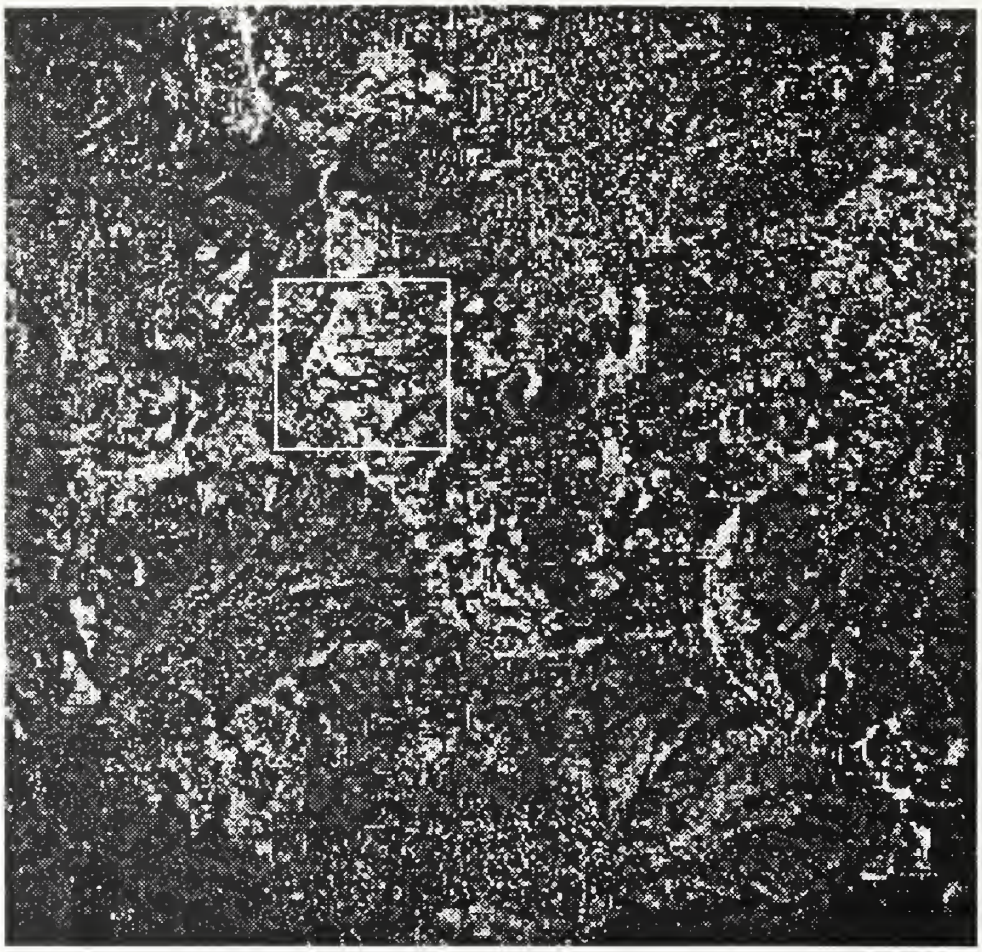
It is hard to say to what extent the Red Buttes Wilderness satisfies any of the above voices. However, by scanning the following aerial photos from 1940 and 1991, we can make a few statements regarding disturbance in the area between those years.

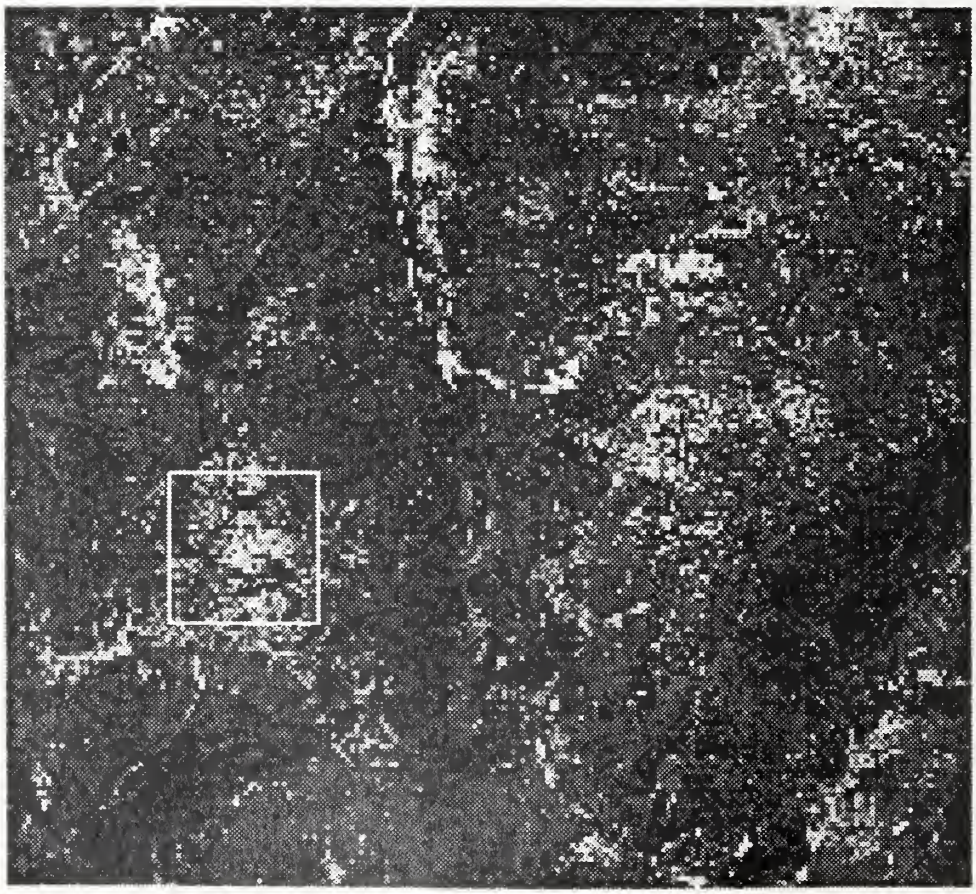
The 1940 photo is at the top of the page; the 1991 photo at the bottom. Pyramid Peak is boxed at the center of these photos. The headwaters of the Steve Fork drain the right portion of the photo, east of the Siskiyou crest, including the small lake centered at the top. Sucker Creek Gap lies just north of this lake and the headwaters of Sucker Creek flow northwest from this point. The small lake to the left of Pyramid Peak drains into Thompson Creek, which flows south into the Klamath River drainage.

Grazing has been common in this area since early in the 20th century. Soil compaction, introduced vegetation and overgrazing are a part of this legacy. Roads to the south of the Peak on the East Fork of Thompson Creek, and to the north along the Steve Fork also date from this time period. The Steve Fork road has also been used for logging activity just north of the wilderness boundary, just out of view at the top edge of the photo.

The view from the air suggests a strong continuity in this area between 1940 and 1991. Roads appear improved, and brushy vegetation looks to have slightly expanded its range, but the overall structural character of the area appears intact. Much of this photo likely covers a Shasta fir zone. Here, Shasta fir dominate, though white fir are common. At the highest elevations, for instance, along the prominent ridge through the center of the photo, Shasta fir may shade into a mountain hemlock zone. This ridge is also home to other species less common in the region, such as knobcone pine.

Although from the air it may be hard to read whether wilderness satisfies the voices calling for its preservation, wilderness designation has clearly maintained an "older" forest mosaic in this area, preserving it from the imposition of the new management mosaic evidenced along the Applegate/Illinois divide.





Wilderness designation seems to have maintained an older forest mosaic in this area around Pyramid Peak (in box), preserving it from the imposition of the new management mosaic evidenced along the Applegate/Illinois divide.

Steve Peak: 1933 and 1995 -- What Has Fire Suppression Done?

Between 1933 and 1935, the Forest Service took 813 "Osborne" photographs from fire look-outs across Washington and Oregon. The "Osborne", named after designer W.B. Osborne, was a combination transit and camera, able to take 360 degree photos—photos providing full-circle view from a central point. The original "Osbornes", as they came to be called, consisted of three 120 degree photos, which, when laid end to end, formed a thirty-nine inch panorama. These shots were utilized to help locate and fight fires.

Currently, a project is underway to take photos from the same sites from which the original Osbornes were taken. When these "retakes" are compared to the originals, change in the landscape from the mid-1930s to the present will become more apparent. Vince Randall is working on the Osborne retakes for the Siskiyou National Forest. According to Randall, these retakes provide key information on the state of forest health across the region, and point to fire suppression as a major component in altering forest structure through the twentieth century.

Randall feels the photo project shows that major impacts on regional forests have not come primarily though high-profile activity such as road-building and management regimes focusing upon clearcuts, but "have come subtly through fire exclusion." Fire exclusion has allowed the proliferation of an understory so dense and conifer overstocking so pronounced, that "you can't get off the trail today." Throw in the recent drought period affecting the region, and a situation of increased forest stress results, promoting, for example, instances of increased mortality due disease.

Randall also feels that the Osborne retakes show an expanding forest. Where fire has been kept out of the system, the forest has expanded. For instance, along ridges previously open, forests now spread. Through it all—settlement, management, fire exclusion—Randall sees a forest of pronounced vigor.

> We don't give the forest enough credit in terms of resilience . . . It heals itself and grows real fast.

The view from Steve Peak: 1995 Randall and 1933 Arnst - Sarlin

Major impacts upon forest structure "have come subtly though fire exclusion." Here, a 1995 retake of the 1933 "Osborne" shows change in the landscape east-northeast (60˚)-to-south (180˚) of Steve Peak. Carberry Creek below Steamboat is visible at 90˚. The prominent ridge from 120˚-180˚ rises to Whiskey Peak. Past burns on the flanks of Kinney Mt. (80˚) and Burnt Mt. (65˚) in the 1933 photo show heavy brush cover in 1995. A lower flank of Steve Peak (125˚) shows a similar pattern. The upper elevations of the Whiskey Peak ridge appear far more open in 1933 than in 1995. Conifers have expanded upslope and brush covers most remaining areas. Clearcuts appear on the 1995 photo at, correspondingly, approximatley 100˚, 130˚, and 160˚.

DLC, GLO, and GIS: Mapping into the 21st Century

Mapmakers generally proliferate at the "frontiers" of civilization, expanding into the "terra incognita" as it recedes before them. Government surveyors who left behind GLO and DLC survey notes from the 19th century are an example of just that sort of mapmaker. Their legacy of years spent scrambling through undergrowth, walking forests, and fording streams has provided a useful record of the landscape they encountered and mapped.

The late twentieth-century inheritors of their legacy likely spend as much time in front of their computer terminals as they do in their hiking boots, talking pixels as much as chains. Such is the changeable nature of "frontier." Mapmakers of today are increasingly reliant upon the expanding "geographic information systems" technology (GIS). GIS technology "links computerized maps to databases that describe the attributes of particular locations on the maps."[132] In this linkage, as databases expand, the range and variability of information maps are able to communicate also expands.

Ed Reilly of the Rogue River National Forest and Larry Zowada of the Medford District of the Bureau of Land Management have worked collaboratively to apply GIS technology to lands managed by their agencies. Particular focus has been directed upon the Applegate watershed.

A series of Reilly's Applegate Watershed maps follows. "Vegetation Cover Types," maps basic vegetation zones across the Applegate watershed. (It is interesting to compare this map to Hickman's "Vegetation Zones" included in the introduction of this report.) "Tree Size" maps the watershed in terms of DBH (diameter breast height). "Canopy Closure" maps the percentage of the forest covered by tree canopy. The highest percentage of coverage category usually correlates to the later seral stages of forest development.

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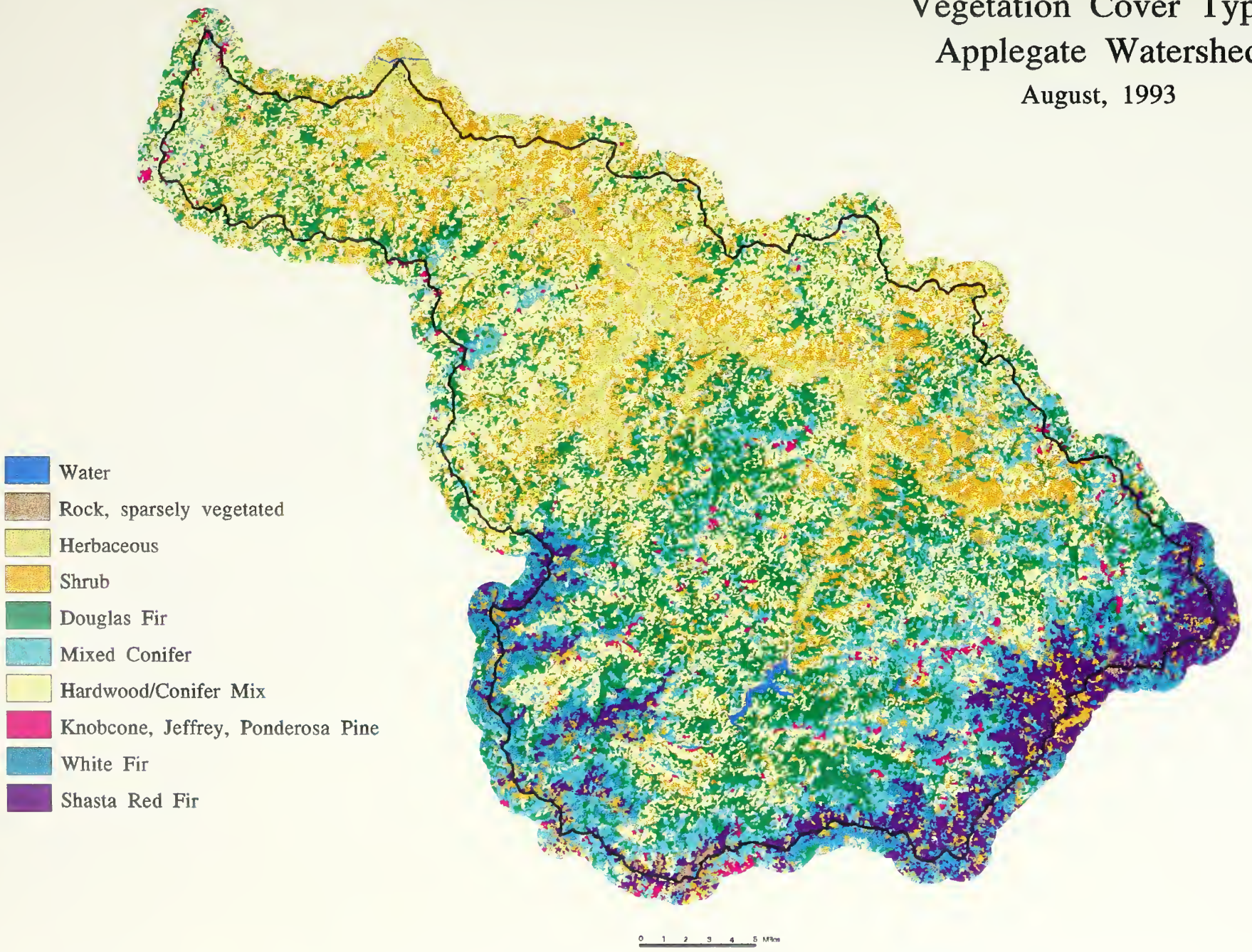
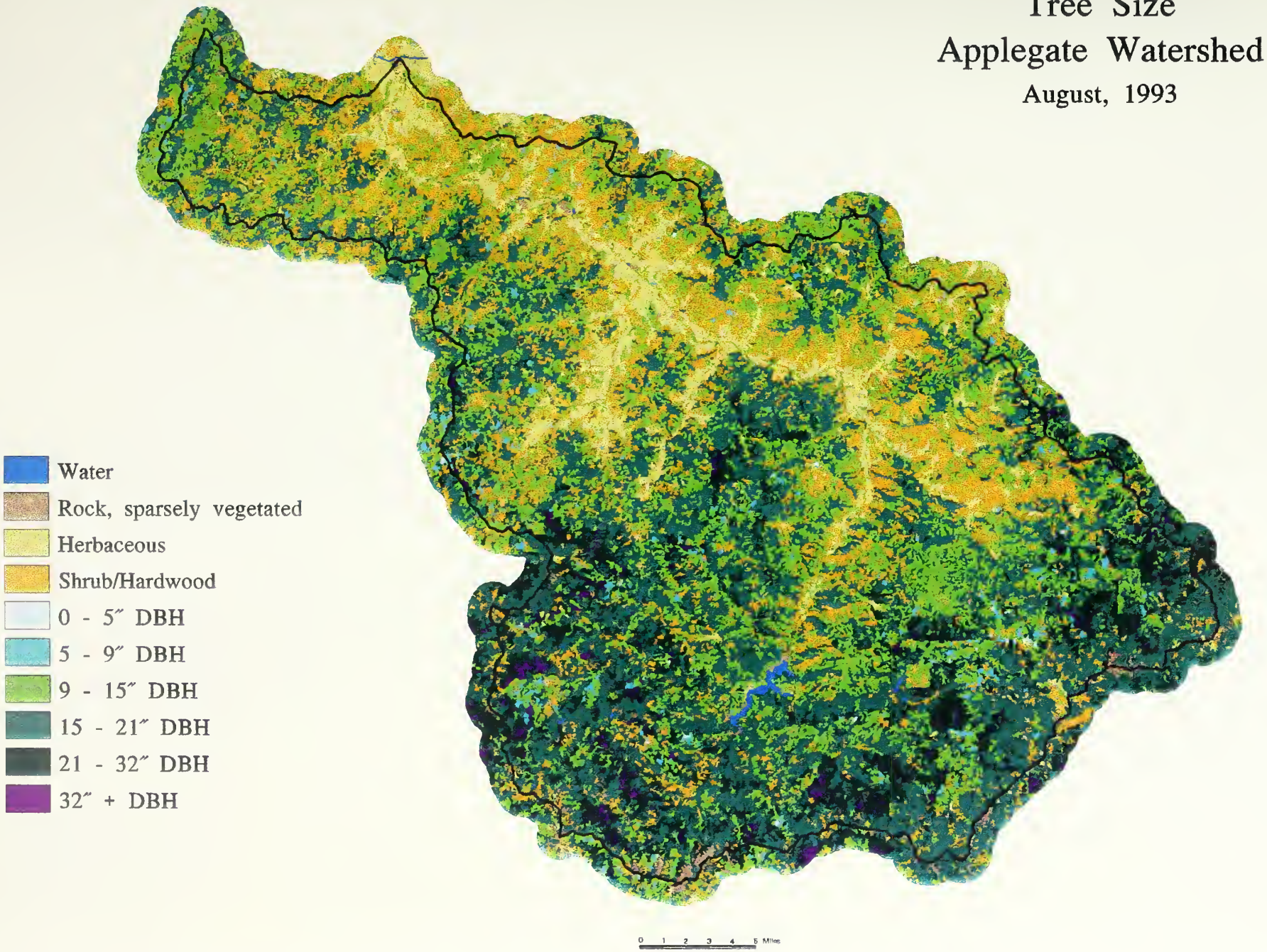
[132] Sam Doak, "Using GIS to Get Involved in Ecosystem Management", *Headwaters Journal*, Summer, 1994, p. 19.

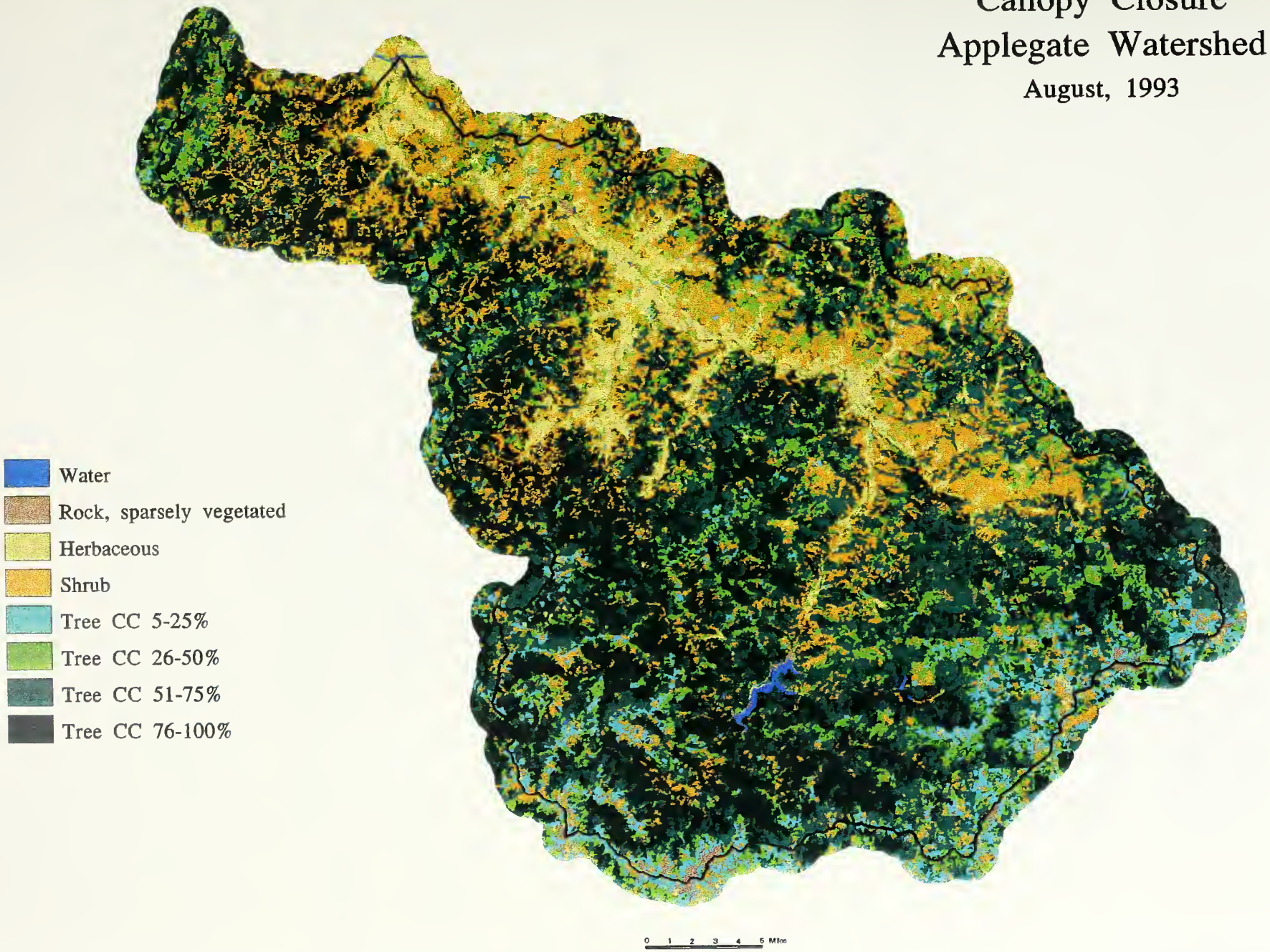
Vegetation Cover Types
Applegate Watershed
August, 1993



Tree Size
Applegate Watershed
August, 1993



Canopy Closure
Applegate Watershed
August, 1993



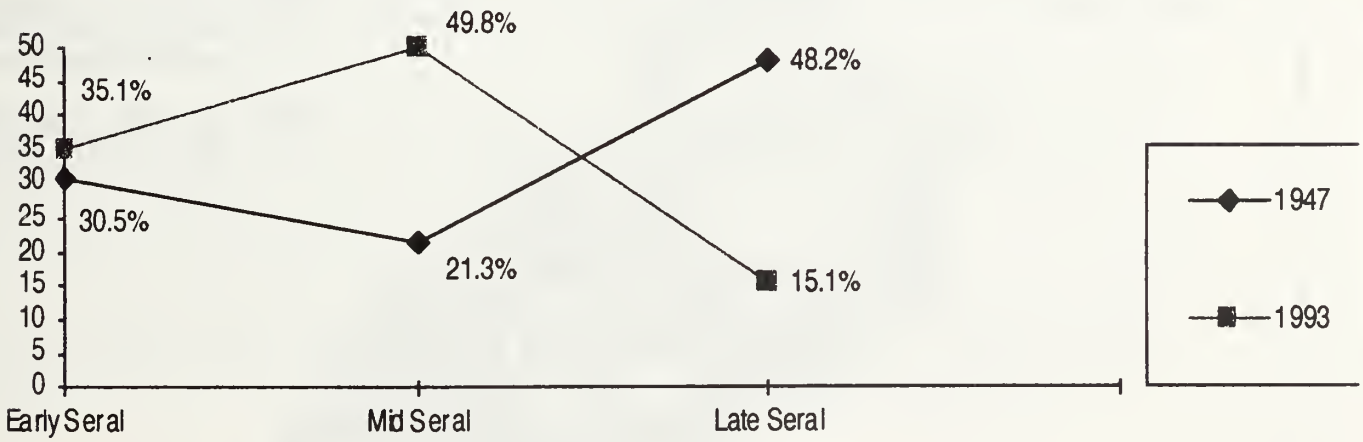
Little Applegate Valley: 1947 and 1993

GIS technology is also useful in mapping data from different sources, or times, for purposes of comparison. Zowada consulted a 1947 Forest Service "Forest Type Map" to create a database of seral stage information for the region at that time. In "Seral Stage Vegetation of the Little Applegate Valley," he mapped the 1947 information alongside 1993 mapped data to show change in seral stage vegetation in the Little Applegate Valley from 1947 to 1993.

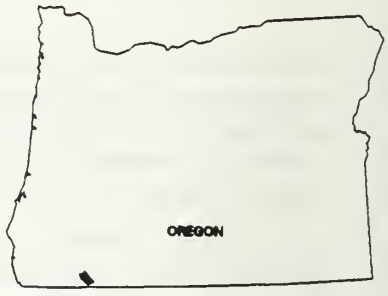
"Early Seral Vegetation" refers to the earliest periods following disturbance, beginning when grasses, forbs, brush, young hardwoods, and conifer seedlings dominate. "Mid Seral Vegetation" refers to stage of development where the canopy begins to close, and density leads to mortality and a decrease in ground cover. "Late Seral Vegetation" refers to the stage of development where mortality and snag formation lead to a more diverse and mature forest structure, with a developing understory.

A chart follows, created from Zowada's data, to show the percentage of area covered by respective seral stages in 1947 and 1993. Both years show similar amounts of early seral coverage. The most obvious change is the 1993 increase in mid seral coverage, up over 28% from 1947, and decrease in late seral coverage, down 33% from 1947. The main management activities affecting these changes are due continued fire suppression between these years and the post-WW II timber harvest. Zowada's map showing acres of seral stage vegetation and respective location follows.

Percentage of Little Applegate Valley by Seral Stage: 1947 and 1993



SERAL STAGE VEGETATION OF THE LITTLE APPLEGATE VALLEY



1947 SERAL VEGETATION

1993 SERAL VEGETATION

Early Seral Vegetation
1947 22,020 acres
1993 25,338 acres

Mid Seral Vegetation
1947 15,405 acres
1993 35,980 acres

Late Seral Vegetation
1947 34,831 acres
1993 10,912 acres

0 1 2 3 4 5 6 7 8 9 10 MILES

0 1 2 3 4 5 6 7 8 9 10 KILOMETERS

N

Comparing the Landscape: GLO/DLC and GIS

Reilly has provided Landsat satellite data—a primary source for his Applegate GIS projects—for comparison to data generated by 19th century Government Land Office surveyors. In particular, Reilly shared information relating to forest-type, canopy closure, average tree size, and primary species composition in two areas corresponding to those analyzed in Chapter One of this report. These areas include the sections containing the ten DLCs in the Middle and Little Applegate sub-basins, and the three townships these sections lie in. (see Chapter One)

By comparing GLO/DLC and GIS data, we can draw conclusions regarding change across this portion of the study area between the mid-1850s and the mid-1990s.

More Douglas-fir

In the GLO surveys of these townships (T38S/R3W, T38S/R4W, and T39S/R3W), Douglas-fir was marked at 7.1% of the total. In the survey of DLCs within these townships, only one single Douglas-fir was marked across all sections containing claims.

In the GIS data, Douglas-fir "dominates" across 31.8% of the entire township landscape. It is also the most common conifer on another 31.1% of township land. Within sections where the original DLCs were located, Douglas-fir dominates 13.8% of the landscape, and is the most common conifer across another 25.5% -- these are the same sections in which DLC surveys marked one single Douglas-fir tree.[133]

Comparing GLO/DLC data to GIS data leads to the conclusion that these lands contain a much greater Douglas-fir population today than they did 150 years ago. This is a conclusion that can be safely spread across much of the study area. If more is better and Douglas-fir as a species is experiencing the good fortune of great numbers, then ponderosa pine seems to be experiencing a reverse fortune.

Less Ponderosa Pine

Across the GLO townships, ponderosa pine was marked at 14.7%; within the DLC sections, at an even greater 17.3%. At this time, markings and narrative records clearly suggest ponderosa pine dominance in some areas, for instance, on the Davidson DLC and Brown DLC in the vicinity of the confluence of the Applegate and Little Applegate Rivers.

Today, however, GIS data shows only 158.6 acres of ponderosa pine dominated forest across all three townships, a scant .2% of the landscape. There is no cited dominance at the section level, where it once most likely occurred. Though pine has a "potential" presence in 38.9% of the landscape (in mixed-conifer, and montane-hardwood-conifer type forest), here it is not as comfortable nor successful co-mingling as douglas-fir, cedar or even jeffrey pine, all of which fair better in mixed forests—ponderosa pine is more comfortable in clumps to itself.

Today, ponderosa pine seems to appear far less frequently across the landscape than it did 150 years ago. Even the nature of its presence has been altered. Whereas it once enjoyed dominance in clumps largely to itself, it now appears scattered as a component in stands dominated by other species.

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[133] According to Reilly, Douglas-fir dominates both the Douglas-fir forest-type, and the mixed-conifer type within these townships. Douglas-fir type covers 24% of the township, while mixed-conifer covers 7.8%, for a total area of Douglas-fir dominance of 31.8%, or approximately 22,262 of the townships' 70,195 acres. It is the most common conifer within the montane-hardwood-conifer type -- which is oak dominant -- and covers 31.1% of the township. Section, and other folowing conclusions rely upon similar readings of the data.

"Diameter Inversion"

When we average the diameter of surveyor markings across township and DLC lands in the 1850s, this is what we find[134]:

Average diameters across townships:

Species	avg. diam.
White Oak	13.7
Black Oak	11.4
Ponderosa Pine	23.5
Madrone	8.3
Douglas-fir	19.1

Average diameters within DLCs:

Species	avg. diam.
White Oak	16.1
Black Oak	20.3
Ponderosa Pine	32.4
Madrone	15.0
Douglas-fir	40.0

At this time, size decreased at the township level. The DLC sections had larger trees. In other words, on average, the larger trees were found at lower elevation, in the riparian areas of the Applegate and Little Applegate Rivers, and Poormans Creek.

In Reilly's GIS data for the same area, size *increases* at the township level. On average, larger trees are found outside of the riparian areas, at the higher elevations of the broader townships. Percentages of lands by size class:

Township-wide:

Size Class 0 (non-forest)	12.8%
Size Class 1 (< 5.9")	.1%
Size Class 2 (5.9 - 10.9.")	10.2%
Size Class 3 (11.- 23.9")	76.2%
Size Class 4 (24.- 35.9")	.8%

DLC sections:

Size Class 0	30.8%
Size Class 1	.1%
Size Class 2	9.3%
Size Class 3	59.7%
Size Class 4	0%

These comparisons show a size inversion over the past 150 years. Whereas the larger average trees previously were found at lower elevation and in riparian areas, they are currently found at higher elevations. It is likely that the larger trees of the riparian areas were victims of agricultural and settlement clearing. Currently, nearly one-third of the DLC section lands are "non-forest." This is likely an increase from 150 years ago, when clearing appears to have been a necessity, even on desirable agricultural land. It is this clearing, and its resultant "non-forest" creation, which lies behind the size inversion of the past 150 years.

In a final brief note of comparison, average DLC hardwood diameter (black oak, white oak, cottonwood, alder, ash, madrone) was 17.5". Average GIS hardwood diameter in areas where hardwoods dominate (55.3% of the section landscape), is approximately 11". This suggests a sizable decrease in hardwood diameter across these sections. Clearing along riparian zones and increased hardwood density suggest themselves as major causes behind this decrease.

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[134] As noted earlier in this report, surveyors marked "average" trees -- representative species, close to corners, not too big (avoiding mortality), not too small (trees needed to be visible). Consequently, GLO/DLC average diameters appear sound approximations of what was on the ground. That said, it should be noted that the madrone and Douglas-fir averages in the DLCs are based on single markings, and are quite likely not sound averages across the DLCs.

CONCLUSION

We have told a story which has centered around a relationship to the land, in reality, many relationships to the land. For millennia, humans have been a part of the regional landscape, shaping it as it has shaped them. The landscape has established environmental limits and humans, to greater and lesser degrees, with greater and lesser levels of impact, have reflected their own wills back against these limits.

In this region of moderate climate, geological richness, and floral and faunal diversity, the landscape has provided generous limits. By all measure, humans have been provided a region of plenitude. How have humans responded to this gift of plenitude?

Over the course of the years covered in this report, it becomes easy to recognize numerous ways in which humans have acted to severely test the limits of the plenitude they have inherited. If the health of the regional ecosystem is any indication, our presence has been sorely experienced. When local impacts such as species extinction, and landscape fragmentation are couched within the broader context of global climate change and surging populations, it becomes easy to imagine the potentially grave consequences of our impact upon our home. Fortunately, our home has proven its resilience. However, it becomes questionable whether that resilience in itself will be enough to allow our region to continue its provision of the plenitude with which we have become so familiar and reliant upon.

At some level, humans need to respond to their impact upon the region with an attitude of respect and obligation, an attitude willing to envision a human presence on the land which will allow the continued flourishing of both humans and the environment.

Within the agencies and scientific community, we see a step in that direction provided by the notion of "ecosystem management." According to Ed Grumbine, ecosystem management "offers a fundamental reframing of how humans may work with nature." He provides a working definition:

> Ecosystem management integrates scientific knowledge of ecological relationships within a complex sociopolitical and values framework toward the general goal of protecting native ecosystem integrity over the long term.[1]

In a sense, this is visionary science, placing humans and nature in relationship, attempting to discern strategies of action aimed at enhancing the health of both.

Another visionary suggestion toward envisioning a future where both humans and nature flourish emerges from within the "radical ecology" movement.[2] A theme commonly wending its way through these schools of thought is that of "biocentrism." Less scientific principle than philosophical or religious underpinning, this notion holds that humans and nature share a fundamental equality within the context of nature, or "life." This is a challenge to more culturally recognizable schools of thought, which could be termed "anthropocentric," and which place humans somewhere above, or other than, nature.

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[1] R. Edward Grumbine, "What is Ecosystem Management?," *Conservation Biology*, v. 8, n. 1., March 1994, pp. 27-38, quotes pp. 27, 31.

[2] This "movement," by no means unified in purpose, goal or content, can be seen to generally include individuals who could be labeled bioregionalists, deep ecologists, ecofeminists, or social ecologists. An introduction to representative thought can be found in, *The Trumpeter: Journal of Ecosophy*, Summer 1995.

Though this conclusion perhaps carries us far afield from the Applegate and Illinois Valleys, it is meant to draw us back to these very locations. If humans are to continue their presence in these valleys, then perhaps it is time to envision ways to enhance human and environmental health as these develop in relationship to each other. Throughout the years, visionaries and boosters have suggested their visions for the land, often rooted in notions of personal economic gain. Perhaps just as often these have resulted in consequences of negative impact upon regional health. Perhaps today it would serve the region well to listen to voices whose visions suggest that the health of the ecosystem is foremost.

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